

USAWC STRATEGY RESEARCH PROJECT

DEVELOPING AIR FORCE ACQUISITION LEADERS FOR THE 21ST CENTURY

by

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ABSTRACT

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The innovative integration of technologies and effective acquisition of defense department capabilities and systems will be crucial in the transformation of the Air Force. Developing acquisition leaders with the requisite competencies and skills to successfully accomplish these formidable challenges will be difficult. Given the importance that acquisition leaders play in the success of their organizations and in the development of our future warfighting capabilities, is the Air Force providing the appropriate direction, skills, training and education, career management guidance, and leadership and command opportunities to nurture, develop, and retain acquisition officers to become the best strategic acquisition leaders? Does the Air Force promote an organizational culture that understands the importance of these acquisition leaders, accepts and rewards them for their commitment, dedication, acumen, and ability to mentor and lead people while meeting the needs of the warfighter? This paper provides the framework and basis to answer these questions. It first provides relevant background and addresses the emphasis on acquisition reform resulting in legislation requiring the Department of Defense (DoD) to implement measures and programs to enhance the effectiveness of the acquisition work force. The paper then provides insight into the environment in which the acquisition professional will work by discussing the transformational changes within the DoD and how the acquisition environment is evolving to support these changes. This leads to a discussion of acquisition work force challenges, such as career field shortages and the lack of leadership focus. These challenges are then addressed through acquisition work force accession and retention initiatives. Following the discussion of the background, current environment and challenges, is a discussion of the Acquisition Professional Development Program (APDP), the new transformational Force Development (FD) concept, the requirement for leadership competencies and skills, and finally leadership and command opportunities. The paper concludes with recommendations to assist the Air Force in nurturing, developing, and retaining acquisition professionals to be successful leaders of the future.

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PREFACE

Developing professionals to lead innovative organizations to meet the objectives of the warfighter in a changing and diverse 21st Century environment will be key in incorporating technological advances and implementing acquisition initiatives, such as evolutionary acquisition and spiral development. The development of a professional work force and its accession and retention will be imperative for success in meeting current and future challenges in an uncertain, complex, ambiguous, and volatile environment.

During my research I have learned a great deal about all aspects of the acquisition officer career field important for creating the best acquisition leaders. Topics such as, career development, leadership skills and competencies, and command opportunities. Several people have assisted greatly in this endeavor and have provided me with guidance and a wealth of information regarding the numerous Air Force acquisition initiatives. I would like to acknowledge Captain Lance Reynolds, HQ AFMC/DP, for preparing me for my research journey by educating me about the on-going Air Force program manager/material leader command equivalency board process. I appreciate the outstanding support from Lieutenant Colonel Dempsey Hackett, AFLSMO, for his expertise on colonel matters in the areas of assignments, job positions, and command boards. A special thanks goes to Major Gary Leong, SAF/AQXD, for his tremendous knowledge and expertise on acquisition career and force development as well as the numerous new acquisition initiatives being considered within SAF/AQ. I am grateful for his assistance in providing me countless background information and documents to assist me in my endeavors.

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DEVELOPING AIR FORCE ACQUISITION LEADERS FOR THE 21ST CENTURY

We will have to say that in any cause the decisive role does not belong to technology – behind technology there is always a living person without whom technology is dead.

—Mikhail Frunze

The innovative integration of technologies and effective acquisition of defense department capabilities and systems will be crucial in the transformation of the Air Force. Developing acquisition leaders with the requisite competencies and skills to successfully accomplish these formidable challenges will be difficult. Transformation has been described as “a process by which the military achieves and maintains asymmetric advantage through changes in operational concepts, organizational structure, and/or technologies that significantly improve warfighting capabilities or ability to meet the demands of a changing security environment.”¹ It is a continuous process essential in meeting the Joint Vision 2020 goal to create a force that is dominant across the full spectrum of military operations – persuasive in peace, decisive in war, and preeminent in any form of conflict.² Attaining this goal requires the unremitting infusion of new technology, modernization, new equipment, effective doctrine, organizational changes, improved training and education, as well as innovative leaders and intellectual people to effectively take advantage of this new technology.³

Defense acquisition plays a critical role in achieving the Joint Vision 2020 goal and meeting the requirements of the nation’s warfighters. It is defined as “the planning, design, development, testing, contracting, production, introduction, acquisition logistics support, and disposal of systems, equipment, facilities, supplies, or services that are intended for use in or support of military missions.”⁴ To meet the needs of national defense, new and innovative technologies and systems must be conceived, evolved, developed, produced, and fielded. In order to accomplish this, aerospace acquisition leaders will be key in fostering innovative concepts; evaluating the efficacy of new ideas; providing organizational environments to encourage critical and creative thinking; and empowering risk taking. These responsibilities are being conducted within a competitive and technology driven strategic environment characterized by the highest degree of uncertainty, complexity, ambiguity, and volatility.⁵

Given the importance that acquisition leaders play in the success of their organizations and in the development of our future warfighting capabilities, is the Air Force providing the appropriate direction, skills, training and education, career management guidance, and leadership and command opportunities to nurture, develop, and retain acquisition officers to

become the best strategic acquisition leaders? Does the Air Force promote an organizational culture that understands the importance of these acquisition leaders, accepts and rewards them for their commitment, dedication, acumen, and ability to mentor and lead people while meeting the needs of the warfighter? This paper provides the framework and basis to answer these questions. It first provides relevant background and addresses the emphasis on acquisition reform resulting in legislation requiring the Department of Defense (DoD) to implement measures and programs to enhance the effectiveness of the acquisition work force.

Next, the paper provides insight into the environment in which the acquisition professional will work by discussing the transformational changes within the DoD and how the acquisition environment is evolving to support these changes. This leads to a discussion of acquisition work force challenges, such as career field shortages and the lack of leadership focus. These challenges are then addressed through acquisition work force accession and retention initiatives. Following the discussion of the background, current environment and challenges, is a discussion of the Acquisition Professional Development Program (APDP), the new transformational Force Development (FD) concept, the requirement for leadership competencies and skills, and finally leadership and command opportunities. The paper concludes with recommendations to assist the Air Force in nurturing, developing, and retaining acquisition professionals to be successful leaders of the future.

EMPHASIS ON DEFENSE ACQUISITION REFORM

Pressures for acquisition reform began in the late 1980s. Commissions and legislative investigations were the beginning of significant changes to acquisition policy and procedures. Substantial emphasis was placed upon the acquisition work force. Broadly defined, “the defense acquisition work force is the personnel component of the acquisition system that includes civilian employees and military members who occupy acquisition positions, are members of the Acquisition Corps, or are in acquisition development programs.”⁶ Legislation was enacted to ensure they received the proper career management, development, education, and training. The DoD responded with a series of department-wide publications implementing the legislation that became the basis for managing acquisition and its work force. To meet the new challenges and threats of the 21st century, defense acquisition and its work force continues to change to meet the Department’s transformational goals, requirements, and objectives.

PACKARD COMMISSION (1985-1986)

President Reagan’s Blue Ribbon Commission on Defense Management, led by David Packard, was the most influential in starting acquisition reform. The commission became known

as the Packard Commission and due to the pervasive nature of acquisition within the DoD, provided numerous recommendations resulting in authorities for acquisition policy, accountability for acquisition execution and lines of command for those with program management responsibilities. Some of the more pertinent findings pertain to enhancing the quality of personnel in the defense acquisition work force:

Our study convinces us that lasting progress in the performance of the acquisition system demands dramatic improvements in our management of acquisition personnel at all levels within DoD. DoD must be able to attract and retain the caliber of people necessary for a quality acquisition program. The defense acquisition work force mingles civilian and military expertise in numerous disciplines for management and staffing of the world's largest procurement organization...compared to its industry counterparts, this work force is undertrained, underpaid, and inexperienced. Whatever other changes may be made, it is vitally important to enhance the quality of the defense acquisition work force--both by attracting qualified new personnel and by improving the training and motivation of current personnel. Training should be centrally managed and funded...to improve the utilization of teaching faculty, to enforce compliance with mandatory training requirements, and to coordinate overall acquisition training policies.⁷

Even before the Packard Commission's final report, President Reagan directed appropriate elements within the Executive Department to begin implementing virtually all recommendations presented to him in the interim report. Within the DoD plan was the expansion of the mission of the Defense Systems Management College (DSMC - Ft Belvoir, VA) to require the school to coordinate the high-quality mandatory acquisition training and education courses intended to prepare military officers and civilian personnel for assignments in the acquisition career fields.⁸

In addition to the organizational and procedural changes implemented as a result of the Packard Commission, the entire acquisition career field was renovated. In June 1989, a Defense Management Review Directive instructed the services to correct deficiencies in the training and development of personnel involved in acquisition by developing plans for a dedicated corps of officers to serve as acquisition specialists. The Air Force (Assistant Secretary of the Air Force for Acquisition (SAF/AQ) and Systems Command) enhanced existing programs for both officers and civilians.⁹ Over the years these programs have evolved substantially and the military officer career management program will be discussed later.

DEFENSE ACQUISITION WORK FORCE IMPROVEMENT ACT (1990)

As a direct result of allegations of fraud and bribery involving defense contractors, consultants, and certain government officials within the DoD between 1988-1989, extensive

investigations by the House Armed Services Subcommittee (101st Congress, 2nd Session) were conducted regarding the Congressional report published in May 1990 documenting findings and recommendations addressing multiple facets of the defense acquisition work force. The findings and recommendations became a bill subsequently enacted as Public Law (P.L) 101-510 and signed by the President in November 1990. A portion of that law, the Defense Acquisition Work Force Improvement Act (DAWIA), added a new chapter (Chapter 87- "Defense Acquisition Work Force") to Title 10 United States Code (U.S.C) covering the various activities and functions of the DoD.¹⁰ The following are the pertinent provisions and requirements contained in the DAWIA:

- Recognition that the acquisition work force must include both civilian and military personnel, and that both categories require adequate training, education, and career development;
- Establishment of an acquisition corps for each military department and one or more corps for other DoD Components;
- Specification of minimum educational and experience requirements for membership in the respective acquisition corps and provisions of special education and training programs for members;
- Establishment of policies and procedures for effective management (including the accession, education, training, and career development) of personnel in DoD acquisition positions;
- Specification of a career development process for acquisition personnel;
- Establishment of a defense acquisition university structure;
- Establishment of a coherent framework for educational development of personnel; in acquisition positions from the basic through intermediate and senior levels; and
- Requirement that the senior level of educational development be a senior course equivalent to existing senior professional military education school courses.¹¹

IMPLEMENTATION OF THE DAWIA

Since 1991, the DoD has adhered to the requirements stated in the DAWIA and has developed programs and made significant improvements and changes in the training, education, and professional development of the acquisition work force. There is now one Acquisition Corps for each military department and one for other DoD components. "The Acquisition Corps is a subset of DoD component's acquisition work force composed of selected military or civilian personnel in the grades of major/lieutenant commander or General Schedule

(GS) 13 and above.”¹² The acquisition work force has been divided into seven acquisition functions and 13 career fields with separate education, training, and experience standards mandated for each career field:¹³

Acquisition Functions	Career Fields
Acquisition Management	<ul style="list-style-type: none"> • Program Management • Information Technology (formerly Communications-Computer Systems)
Procurement and Contracting	<ul style="list-style-type: none"> • Contracting (includes construction) • Purchasing and Procurement Technician • Industrial/Contract Property Management
Systems Planning, Research, Development, Engineering, and Testing	<ul style="list-style-type: none"> • Science and Technology Manager • Systems Engineering • Facilities Engineering • Test and Evaluation
Manufacturing and Production	<ul style="list-style-type: none"> • Manufacturing, Quality, and Production
Acquisition Logistics	<ul style="list-style-type: none"> • Acquisition Logistics
Business, Cost Estimating, and Financial Management	<ul style="list-style-type: none"> • Business, Cost Estimating, and Financial Management
Auditing	<ul style="list-style-type: none"> • Auditing

TABLE 1. ACQUISITION FUNCTIONS AND CAREER FIELDS

In addition, the DoD developed a comprehensive, and interrelated set of directives, instructions, and manuals to govern the entire acquisition process. These “5000 series” documents replaced approximately 65 acquisition related publications and have been used to standardize practices and emphasize timely documentation. They also correlate the acquisition management system with requirements definition as well as the planning, programming, and budgeting system (PPBS).¹⁴ They incorporate the DAWIA requirements for acquisition work force educational and career development; education, training, and experience opportunities; and a senior level course for senior leaders. These documents continue to be modified and improved and have become the basis for managing defense acquisition and its work force by mandating education and training standards and career development:

- *DoD Directive (DoDD) 5000.1*, “The Defense Acquisition System,” (2000). The directive provides policies and principles for all DoD acquisition programs and describes management principles applicable to these programs.¹⁵ Currently under revision.
- *DoD Instruction (DoDI) 5000.2*, “Operation of the Defense Acquisition System,” (2002). This instruction establishes a simplified and flexible management

framework for translating mission needs and technological opportunities, based on validated mission needs and requirements, into stable, and well-managed acquisition programs that include weapon systems and automated information systems.¹⁶ Currently under revision.

- *DoD 5000.2-R*, “Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs,” (2002). This regulation provides the procedures for MDAPs and MAIS programs, serves as the model for these programs, and contains formats for required acquisition documentation.¹⁷ Currently under revision.
- *DoDD 5000.52*, “Defense Acquisition Education and Training Program,” (1991). This directive addresses the defense acquisition training and education programs, sets broad policy statements on the subject, establishes responsibilities for implementing that policy, and provides procedures relative to that training and education program.¹⁸
- *DoD 5000.52-M*, “Acquisition Career Development Program,” (1995). Replaced 1991 version of *DoD 5000.52-M* “Career Development Program for Acquisition Personnel.” This manual provides detailed information on establishing the Defense Career Development Program for Acquisition Personnel, including its operation and administration. The manual established mandatory and desired training courses for the 13 acquisition career paths as well as the three certification levels within each of the 13 career fields.¹⁹
- *DoDD 5000.57*, “Defense Acquisition University,” (1991). This directive establishes the defense acquisition university (DAU) structure to provide for the professional educational development and training of the acquisition work force, and to develop dedication, training, research, and publication capabilities in the area of acquisition.²⁰ The directive also established a senior-level acquisition course at the Industrial College of the Armed Forces (ICAF) to be the preeminent course for civilian and military members of the Acquisition Corps.²¹
- *DoDI 5000.58*, “Defense Acquisition Workforce,” (1992). This instruction establishes policy, assigns responsibility, and prescribes procedures and criteria for designating acquisition positions and critical acquisition positions, for management of the acquisition work force, and for the establishment and management of the Acquisition Corps.²²

The Deputy Defense Secretary, Paul Wolfowitz, recently “determined that DoDD 5000.1, DoDI 5000.2, and DoD 5000.2-R required revision to create an acquisition policy environment that fosters efficiency, flexibility, creativity, and innovation.”²³ Therefore, on 30 October 2002, these documents were canceled immediately and interim guidance was provided throughout the department. Revised documents are being coordinated with senior leaders of applicable organizations. Although there is a suspicion of new documents and uncertainties about how they can be implemented, many of the changes offer a progressive tone, avoiding the many checks and balances that currently inhibit the fast evolution of new technology into the field. The following are some of the changes expected to occur that will affect our acquisition leaders: responsibility for acquisition will be decentralized to increase individual authority; continuous examination and adoption of innovative practices will be encouraged and both good and bad lessons learned would be institutionalized; acquisition, requirements and financial communities will maintain continuous and effective communications with each other and the operational users; program managers will be responsible for projecting total life-cycle systems management and costs; and management will be streamlined with short, clearly defined lines of responsibility, authority, and accountability.²⁴ These changes and the emphasis on decentralized authority will require leaders with the proper leadership competencies, skills, experiences, and acquisition acumen to be selected for the most appropriate acquisition leadership positions.

ADJUSTING THE ACQUISITION FRAMEWORK FOR TRANSFORMATION

Defense Secretary Donald H. Rumsfeld stated in his annual report to the President and Congress that “New threats call for a new approach to defense and highlight the need to transform the nation’s armed forces now.”²⁵ The report acknowledged that over the past decade, the DoD has invested too little in its people, equipment, and infrastructure and the new defense approach defines and calls for balancing four risk areas: force management, operational, future challenges, and institutional risk. Current acquisition policies and practices were identified as institutional risk that “results from factors affecting the ability to develop management practices, processes, standards and controls that use resources efficiently and promote the effective operation of the defense establishment.”²⁶ Mitigating institutional risk will require revamping the Department’s business practices, overhauling its major management processes, and transforming its support structure. This will require increasing effectiveness through accountability and efficiency and revitalizing the Defense establishment by accomplishing the following goals:

- Reducing the cycle time for decisions on weapons development and logistics support;
- Shortening and bringing realism into our program budgeting process;
- Reducing inefficiency and allocating savings to higher priority needs;
- Attracting talented people to defend the nation;
- Ensuring the nation's defense maintains its technological advantage;
- Ensuring the defense infrastructure is sized and modernized to meet the needs of our forces; and
- Developing metrics to track and measure how well the Department is performing.²⁷

The DoD will focus efforts towards these goals by instituting the programs such as: modernizing DoD business processes; improving the management of acquisition, technology, and logistics; properly sizing and modernizing DoD installations and facilities; and spurring innovation in the industrial base.²⁸ The DoD is planning on improving the management of acquisition, technology, and logistics by achieving acquisition and technology excellence as well as chartering a new acquisition course. Achieving acquisition and technology excellence will be accomplished by improving the management of acquisition and technology programs with the aim of accelerating the fielding of systems through new approaches to development and the adoption of best business practices in managing programs.²⁹ Chartering a new acquisition course has promulgated a new acquisition process emphasizing rapid acquisition with demonstrated technology; time-phased requirements and evolutionary development; and integrated test and evaluation.³⁰

In chartering the new acquisition course, the DoD has established a preference for the use of evolutionary acquisition (EA) strategies relying on spiral development processes to reduce acquisition cycle time and speed delivery of advanced capabilities to warfighters. Evolutionary acquisition and spiral development will emphasize the use of mature technologies while allowing for the insertion of new technologies and capabilities over time. It will provide the best means of getting advanced technologies to the warfighter more quickly while providing follow-on improvements in capability.³¹

In response to the preference for EA and spiral development, the Assistant Secretary of the Air Force for Acquisition, Dr. Marvin. R. Sambur, established a reality-based acquisition system policy for all non-space Air Force programs (Air Force space programs are now under the authority of the Undersecretary of the Air Force). The two overarching objectives of this policy are to shorten the acquisition cycle time and gain credibility within and outside the

acquisition community. Acquisition work force members at all levels are expected to seek innovative ways to accomplish these objectives through teamwork, trust, common sense, and agility. The intent is to be able to rapidly deliver to the warfighters affordable, sustainable capability that meets their expectations and at the promised cost. Program managers are required to shift from avoiding risk to managing it. They are expected to manage expectations so senior acquisition and warfighter leadership aren't surprised by cost growth, performance shortfalls, or schedule slips.³²

ACQUISITION WORK FORCE CHALLENGES

It will be critical to empower tomorrow's work force and provide the proper balance of skills, education, training, and experiences to transform the acquisition work force to meet future demands within the 21st century national security environment and the changes discussed thus far. According to the Honorable David J. Walker, Comptroller General of the United States:

The key competitive element in the 21st century will be people. People are the source of all knowledge and in the knowledge age, having enough of the right people with the right skills will make the difference between success and failure. Yes, business processes and technologies are important, but people are essential. Unfortunately, the government and many other employers have all too often treated their employees as a cost to be cut rather than an asset to be valued. This must change! Due to the numbers driven and inadequately planned downsizing campaign of the 1990s, the Federal work force is smaller. However, it's also out of shape, has a range of skills imbalances and is facing a huge succession planning challenge. As a result, we recently put "strategic human capital management" on our "high risk list."³³

This is especially true for the acquisition work force since it will be undergoing extensive changes to meet the current and future demands previously discussed. A major goal of the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD AT&L), Mr. Pete Aldridge, is to revitalize the acquisition, technology and logistics work force. During an Aerospace Commission testimony, he noted that "50% of the acquisition work force will be eligible to retire in the next four to five years, and the military Acquisition Corps is not attractive to military personnel who look toward a long career of contributions and promotions that go along with a valued military skill."³⁴ Since 1989, the Air Force acquisition work force has been reduced by more than 40% creating skills imbalances.³⁵ Therefore, the development of a professional work force and its accession and retention will be imperative for success in meeting current and future challenges in an uncertain, complex, ambiguous, and volatile environment. Leaders must be capable of accepting greater responsibility for decision making in a diverse environment. They must be highly skilled, multi-functional, and able to use and adapt to new

information-age technologies, and flexible enough to adapt to the change and uncertainty that will dominate the future security environment.³⁶

THE CIVILIAN ACQUISITION WORK FORCE

Senior DoD management recognizes that its civilian employees are a DoD asset and are in the process of implementing recommendations identified in the final report of the Defense Acquisition 2005 Task Force, entitled “Shaping the Civilian Acquisition Workforce of the Future.” The task force was chartered to establish a civilian career management program consisting of recruiting, compensation, retention/attrition, career development, and motivation alternatives for the development of a civilian DoD acquisition work force capable of coping with 21st century acquisition management issues as it replaces the current aging workforce.³⁷ “Most of today’s work force are part of the baby boomer generation and are nearing retirement age. Many of those retiring will take with them highly specialized and technical skills that are not easily replaced. This will become even more acute as the work force demands have outstripped the population growth. The DoD individuals about to retire represent a significant portion of the civilian leadership today.”³⁸ The 2001 Quadrennial Defense Review (QDR) report addresses the need to revitalize the DoD establishment:

Skilled, talented, and motivated people are the foundation of a leaner, more flexible support structure. Improving the skills of the existing work force and recruiting, retaining, training, and educating new people must be a top priority. Many of the skills the Department needs are the same ones most in demand in the private sector. The Department must forge a new compact with its warfighters and those who support them – one that honors their service, understands their needs, and encourages them to make national defense a lifelong career. Accomplishing this management imperative will require strong leadership and innovative thinking about how to attract, motivate, and compensate the work force.³⁹

The successful implementation of the Task’s Force’s recommendations will be imperative. The retirement of such a great number of civilians will have an enduring affect upon the acquisition work force. The wealth of knowledge gained by these individuals through their vast experiences, opportunities, and years of service are a critical resource in understanding the past and providing lessons learned. They are a viable continuity base for the military acquisition work force and offer the military knowledge, assurance, as well as leadership and mentoring in an area that continues to evolve and change to transform to meet the needs of today’s and tomorrow’s warfighter. Therefore, in order to alleviate this void, it is vital the DoD encourages talented acquisition professionals to stay in the civilian and military service, increase their

leadership opportunities, and recruit new talent that will continue to meet and exceed future challenges and expectations.

THE ACQUISITION OFFICER WORK FORCE

Recruiting and retaining the highest quality men and women are among the Air Force's greatest challenges given the current economic environment.⁴⁰ This has resulted in a concern with not only an unbalanced civilian work force but also a continued decline in officer retention, including in the Acquisition career fields.

Acquisition is a mission support (lieutenant colonel and below not possessing an aeronautical rating; excludes non-rated operations and non-line officers (medical officers, lawyers, chaplains)) career field and according to the Officer Classification Manual (AFMAN 36-2105), is segregated into the following five acquisition officer career fields and associated Air Force Specialty Codes (AFSCs):⁴¹

- Scientist (61S) – Conducts or manages programs, projects, activities to perform research. Includes categorical specialties such as Analytical, Behavioral, Chemist, Physicist, and Mathematician.
- Developmental Engineer (62E) – Plans, organizes, manages, and implements systems engineering processes to assure required capability over the life cycle of Air Force Systems. Includes categorical specialties such as Astronautical, Aeronautical, Computer Systems, Electrical/Electronic, Flight Test, Project, and Mechanical.
- Acquisition Manager (63A) – Manages defense acquisition programs covering every aspect of the acquisition process, including integrating engineering, program control, test and deployment, configuration management, production and manufacturing, quality assurance, and logistics support. A specialty AFSC has been identified (60C) for Program Directors responsible for specifically selected major defense system acquisition programs. They are also included in the acquisition management category.
- Contracting (64P) – Plans, organizes, manages, and accomplishes contracting functions to provide supplies and services essential to Air Force daily operations and warfighting mission.
- Finance (65F) – Policy planning and assistance in programming, formulation, direction, and inspection of fiscal management activities. Includes categorical specialties such as Audit, Financial Management, and Cost Analysis.

Career Field Shortages

Over the past several years, one of the primary reasons Air Force officers with critical skills experience have separated from military service is to seek higher compensation in the civilian sector. This has resulted in shortages in certain career fields. A critical skill has been designated as “a specialty that is essential to the accomplishment of a defense military mission, has demonstrated personnel shortages (aggregate or at certain skill levels) that negatively impact the successful accomplishment of that mission, and has high training investment or replacement costs.”⁴²

The Air Force is having a problem retaining acquisition mission support officers in the scientific (61S); engineering (62E); and acquisition program management (63A) career fields. All three are interdependent with more than 40% of military scientists and engineers transferring into acquisition management.⁴³ Serious problems have been identified with retaining the mid-career level acquisition officers of these three career fields that have 4-13 commissioned years of service (captains and majors); however, there are also retention issues with lieutenant colonels and colonels. This is illustrated in Table 2. The table presents assigned versus FY 2001 authorization data for each of the associated AFSCs (61S, 62E, 63A) for the ranks of captain to colonel.⁴⁴ Since Fiscal Year 1996 (FY96), the mission support retention rates have remained a constant 44%. However, over the past three years, rates for developmental engineers have declined to 32% (lowest in seven years), the rates for scientists have plunged to 36% (dropping 17 points since FY99) and the rates for program managers have dropped to 40%.⁴⁵ Unfortunately, the retention decline is expected to continue.

In addition to the lower retention rates, the accession rates for all three AFSCs are also low. In FY01, the overall mission support career fields accessed an average of 113% of the lieutenants required for sustainment (the number of accessions required to grow enough captains, majors, etc.) in order to meet career field requirements. This is a big improvement over FY00 when the average accession rate was 79%. However, in FY01 the accession rate for the developmental engineers (62E) was well below the average at 60% and the rates for scientists (61S) and program managers (63A) were 107% and 116%, respectively.⁴⁶

These officers are our future acquisition leaders and this issue needs to be resolved in both the short and long-term to ensure our best officers are there to lead and manage the most difficult and challenging programs in the 21st century. Initiatives to address these accession and retention issues will be discussed later.

61S	Authorized	Assigned	% Assigned
Capt	436	291	66.7%
Maj	199	140	70.4%
Lt Col	88	85	96.6%
Col	30	21	70.0%
Total	753	537	71.3%

62E	Authorized	Assigned	% Assigned
Capt	1386	801	57.8%
Maj	577	398	69.0%
Lt Col	237	215	90.7%
Col	46	31	67.4%
Total	2246	1445	64.3%

63A	Authorized	Assigned	% Assigned
Capt	804	558	69.4%
Maj	770	570	74.0%
Lt Col	700	574	82.0%
Col	208	169	81.3%
Total	2482	1871	75.4%

All 3	Authorized	Assigned	% Assigned
Capt	2626	1650	62.8%
Maj	1546	1108	71.7%
Lt Col	1025	874	85.3%
Col	284	221	77.8%
Total	5481	3853	70.3%

TABLE 2. ACQUISITION MANNING DATA

Lack of Leadership Focus

Leadership is not so much about technique and methods as it is about opening the heart. Leadership is about inspiration -- of oneself and of others. Great leadership is about human experiences, not processes. Leadership is not a formula or a program, it is a human activity that comes from the heart and considers the hearts of others. It is an attitude, not a routine.

—Lance Secretan

Lack of proper leadership focus is another reason Air Force officers with critical skills experience have separated from military service. According to the most recent exit survey, senior leaders are saying three of the top five reasons people leave the Air Force are directly

related to supervisors and leaders. They are leaving because of the lack of recognition of one's efforts, lack of leadership at the unit level, and lack of job satisfaction.⁴⁷ This information is substantiated in a recent General Accounting Office (GAO) report regarding DoD military personnel retention. According to this report, "the primary reasons service members cited for leaving or considering leaving the military were their basic pay, the amount of personal/family time, and the quality of leadership."⁴⁸ Although this information applies to mid-career officers across the entire DoD, it is reasonable to associate and apply it to Air Force acquisition specialties such as scientists, developmental engineers, and program managers. The top five reasons cited by mid-career officers for joining the military and leaving (or considering leaving) the military are listed in the following table:⁴⁹

Reasons for Joining the Military	Reasons for Leaving the Military
Serve Country (39%)	Amount of personal and family time (24%)
Education Benefits (25%)	Basic Pay (23%)
Challenging Work (23%)	Job Enjoyment (17%)
Attracted to the Military (16%)	Quality of Leadership (17%)
Specific Occupation (16%)	Retirement Pay (15%)

TABLE 3. RATIONALE FOR MILITARY PERSONNEL

While quality of leadership is listed as the fourth reason for leaving the military, it has a significant influence on both job enjoyment (third) and the amount of personal and family time available (first). Supervisors considered "workaholics" often expect subordinates to work the same or greater hours impinging upon their personnel time. The importance of both job enjoyment and personal/family time may also be attributable to the significant differences between the "Baby Boomer" generation and Generation "X." According to a Strategic Studies Institute report written by Dr. Leonard Wong on the subject, officers from these two generations think, perceive, and understand things differently.⁵⁰ The Baby Boom generation was born between 1943 and 1960 (lieutenant colonels and above) and Generation X (lieutenants, captains and majors) was born between 1960 and 1980. Baby Boomers grew up during a time of economic prosperity against a backdrop of rebellion and indulgence and entered adulthood optimistic and driven.⁵¹ It was the overworked Baby Boomer who allowed "24/7" to become the norm and brought zero defects, careerism, and micromanagement into the work force.⁵²

On the other hand, Generation Xers grew up in a society replete with downsizing and restructuring and developed a cynical, pragmatic, survivor mentality as they experienced a less idyllic world than their Boomer predecessors.⁵³ As they entered the work force, they remembered the workaholic tendencies of their Baby Boomer parents and responded with an intense pursuit of balance.⁵⁴ The differences between the generations are great; however, Dr. Wong, during his research conducted with Army officers, found the distinction less glaring within the Army, because he believes entering the military tends to homogenize the population.⁵⁵ Therefore, these results can easily be applied to Air Force officers who would react similarly. The following Generation X findings directly correlate to the GAO report findings in Table 3 for all DoD mid-career officers and can be associated with the Air Force as well:

- They have grown up relying on themselves and are more confident in their abilities and believe they will succeed regardless of their circumstances;
- As the economy continues to grow, the perceived risk in leaving the Army continues to shrink;
- Loyalty is seen differently – loyalty is based upon a bond of trust between the Army and the officer, not on the promise of life long employment compromised by the strain on organizational commitment from downsizing;
- They want more balance between life and work – being an Army officer was deemed to be a noble profession; however, not an all-consuming source of self-identity;
- Pay is a critical issue and must be adequate, but more money alone will not keep them from resigning; and
- Let down by authority figures, they are not impressed by rank or hierarchical position, are extremely skeptical towards authority, and critical of senior leaders.⁵⁶

Senior leaders must understand and accept the differences between the two generations and embrace them. In order to retain mid-level Air Force officers such as scientist, developmental engineers, and program managers, and the future officers of Generation “Y,” senior leaders must change and foster a climate and culture of trust to allow these mid-level officers to thrive in an environment that ensures their success to become future acquisition leaders. Senior leaders at all levels need to allow time for reflection and strive for balance between personal time, work, and family. The value of the military institution should be stressed such as embracing their desire to serve their country (the number one reason they joined the military), instead of the occupational aspects of acquisition. Micromanagement and the zero-defects mentality must stop if they are expected to operate in an environment of risk

management versus risk aversion. To expand their knowledge base and executive skills, mid-grade officers should be involved in as much decision-making as possible to feel valuable and a part of the process.

Since technological innovation is a key part of transformation, senior leaders need to become more comfortable with technology and welcome the ideas and feedback of a generation that grew up in an evolving and complex technological environment.⁵⁷ Incorporating these changes will require strong quality acquisition leaders who are suited for the challenge, have a positive attitude, are willing to adapt, and are not threatened by the differences between the generations. In order for these changes to be successful within their organizations, senior leaders must “lead by example” and enforce the values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage as well as the mental, physical, and emotional attributes necessary to shape and develop the character of our future leaders.⁵⁸ Strong and successful leaders possess these values and attributes and develop interpersonal, conceptual, and technical skills to positively influence their people to effectively and efficiently accomplish the mission while improving the organization.⁵⁹

In order to meet the challenges levied by the challenging environment of the 21st Century, it is imperative the Air Force actively pursues all initiatives necessary to retain and recruit these acquisition leaders of the future, and it does not accept the downward trends previously identified. It is important to understand the generational differences and continue to investigate the reasons for the accession and retention reductions in order to place the proper emphasis on the appropriate corrective measures.

ACQUISITION WORK FORCE ACCESSION & RETENTION INITIATIVES

To attract and retain scientist, engineer, and program manager talent, the Air Force is instituting several initiatives within the acquisition community to emphasize their value and importance and ensure the best and most qualified acquisition professionals will be tomorrow's acquisition leaders. First, the Assistant Secretary of the Air Force for Acquisition (SAF/AQ) has been appointed as the functional manager for not only program managers, but all Air Force scientists and engineers. There will now be a common voice within the Pentagon to represent the interests of these career fields. Second, an emphasis will be placed upon intensifying college recruiting and re-recruiting engineers and program managers. Senior engineers will be expected to mentor junior engineers, receive their feedback, and assure them the Air Force is working on their issues. Third, a career development guide is being created to help define career goals, professional development, and provide paths to greater career opportunities. This

guide will be essential for the fourth initiative to develop a mentoring guide. This guide will be World Wide Web (web) based to facilitate and improve mentoring activities, and assist junior scientists, engineers, and program managers with finding the appropriate mentors. Fifth, to continue and enhance education and training opportunities, co-op programs will remain. This will allow students to work part-time while attending class or alternate between working one term and going to school the next. Lastly, monetary retention bonuses will be offered to mid-level scientists, engineers, and program managers to assist in making an Air Force officer career more financially competitive with civilian sector salaries.⁶⁰

Regrettably, monetary bonus programs are short-term measures because of their dependence upon the economic environment, accession and retention rates, the cyclical interest and limited long-term emphasis in certain career fields, and ultimately, budget availability. In FY 2002 an officer accession bonus of up to \$60,000 was authorized. The Air Force is planning on using it in such critical career areas as engineering. An even bigger Critical Skills Retention Bonus (CSRB), which could pay up to \$200,000, was authorized in the FY 2001 National Defense Authorization Act to improve retention in targeted critical skills. The CSRB gives service secretaries broad authority and flexibility to address key retention areas. Approximately \$39M was budgeted for the Air Force officer CSRB in FY 2003. Unfortunately, Congress only authorized approximately \$19M in the appropriations bill.⁶¹ This reduction is an example of changes that directly affect budget availability and challenge the Air Force leadership to make difficult fiscal prioritization decisions. Limited funding is one of the main reasons bonus programs are not continued or considered for the long-term.

Although the funding provided is less than expected, the Air Force is instituting this non-rated officer bonus program for scientists, developmental engineers, and acquisition program managers who have four to thirteen years of commissioned service. The Air Force has notified Congress it will use these bonuses beginning in FY 2003.⁶² These officers will be eligible to receive a retention bonus of up to \$40,000 (\$10,000 per year for up to four years). Although the manning data in Table 1 for lieutenant colonels and colonels is not as low as the mid-grade officers, the percentages are still low for colonels in all career fields (61S, 62E, 63A) and lieutenant colonel program managers (63A). However, bonuses are not being offered to these senior ranks. This leaves the impression these leaders, also highly sought after in the commercial sector, are not important to retain and the Air Force isn't looking at long-term implications. Given the current volatile, uncertain, complex, and ambiguous environment, strong acquisition leaders with the proper leadership skills and acquisition knowledge are

needed to lead the acquisition community and provide important mentoring to junior and mid-grade officers, tomorrow's future leaders.

Offering this bonus to the senior leaders will accomplish two objectives. First, it provides an example to the baby boomer generation that Air Force acquisition leaders who work hard and tirelessly are appreciated, rewarded, and valued; the Air Force wants to retain their skills; there will be a positive future for their careers; and leadership opportunities may be offered. Secondly, it will address the potential long-term retention problem with mid-grade officers as they climb in rank and have ended their four year bonus commitment. The bonus at the higher ranks would assist in retaining their expertise required for lieutenant colonel and colonel positions.

In FY 2001, to alleviate the long-term critical shortage burden, the Air Force determined the necessity for a needs-based redefinition of their manpower requirements and a strategic plan. An acquisition requirements review was to be conducted to realistically and accurately determine the specific qualifications, quantity, and mix of civilian, military (to include Guard and Reserve), and contractor support personnel necessary to successfully perform their acquisition mission in 2005 and beyond.⁶³ Focus groups were to identify business processes to be reengineered to overcome limitations on available talent and to define and quantify future work force characteristics. The groups were to be comprised of subject matter experts from each of the acquisition functional disciplines, specifically, program management, systems planning research development and engineering, test and evaluation, contracting, communication information, acquisition logistics, functional management, and manufacturing, production and quality assurance.⁶⁴ As a result, initiatives to improve business practices were identified and have become initiatives for agile acquisition, to deliver new capability to the warfighter as quickly as possible. However, the task to identify future requirements proved daunting given the fact current acquisition manpower requirements had not been validated. The groups were only able to identify general trend information (a 10-20% increase) for what they believed would be future requirements.

To meet the original tasking, the scientific and engineering (S&E) community in FY 2001 conducted a comprehensive study on S&E positions and validated current requirements by assessing their percentage of time and the associated work performed and not performed. This led to another study in FY 2002 that looked into future S&E manpower requirements. This report has not yet been published. Unfortunately, the other functional disciplines, including program management, have not validated current requirements or addressed future requirements. This information will be necessary and important in determining the depth of the

problem with regard to retention and accession as well as if there are enough personnel to meet the demands and work requirements levied by their organizations and the needs of the Air Force.

To recognize the exceptional accomplishments of its acquisition work force (military and civilian, active and reservists) members, teams, and organizations, the Air Force has developed nine acquisition specific award programs:⁶⁵

- Sixteen “Air Force Contracting Awards” are given to outstanding contracting units and members for accomplishments in pricing, purchasing, contracting, contingency contracting, support, quality assurance, and professionalism.
- The “Outstanding Contribution to Air Force Competition Award” is provided to contracting personnel, teams, and organizations for contributions to competition in the most recent FY.
- The “Air Force Lightning Bolt Award” recognizes the significant accomplishments of individuals or teams and their contributions in the Lightning Bolt initiatives designed to streamline acquisition organizations, develop superior acquisition strategies, focus attention on risk management versus risk avoidance, and encourage the use of teaming as a work force multiplier.
- The “Air Force Value Engineering Awards Program” recognizes individuals and organizations whose exceptional use of value engineering techniques reduced costs, and promoted efficiency without degrading quality.
- The “Financial Management and Comptroller Annual Awards Program” recognizes 13 individuals and six groups for outstanding performance in the financial management and comptroller community.
- The “General Thomas P. Gerity Memorial Award” is provided to an individual, specifically field grade officers and civilian equivalents (GS/GM-13 through 15), who has made an outstanding contribution to Air Force logistics management.
- The “Honorable Dudley C. Sharp Award” is provided to an individual who is engaged in some phase of logistics, and has substantially improved the operational cost effectiveness of the Air Force.
- The “John J. Welch Jr. Award” is provided to teams, not organizations, and focuses on management level achievements through a teamwork approach rather than individual recognition and recognizes achievements during a calendar year.
- Four “Science and Technology Awards” are provided to individuals or teams for their significant accomplishments in R&D that supports the Air Force mission.

Valuing the work force and acknowledging the accomplishments of those that have contributed greatly to acquisition is vital. Individuals, teams, or organizations may not win; however, being nominated for such awards is an honor and shows they are appreciated for their efforts. Therefore, it is important for supervisors and organizational leaders to know about these awards, take the time to recognize their people, and write exceptional awards worthy of winning.

Although Air Force leadership has placed emphasis on addressing the retention problem of scientists, developmental engineers and program managers by developing career and mentoring guides, providing educational opportunities, offering monetary compensation, addressing manpower requirements and qualifications, and recognizing outstanding accomplishments of the work force, they have not addressed the importance of leadership development or a change required in Air Force culture. Developing professionals to lead innovative organizations to meet the objectives of the warfighter in a changing and diverse 21st Century environment will be key in incorporating technological advances and implementing acquisition initiatives, such as evolutionary acquisition and spiral development.

ACQUISITION PROFESSIONAL DEVELOPMENT PROGRAM

The top priority within the Air Force acquisition community has been to train, educate and certify the acquisition work force to ensure they successfully attain the appropriate tools and skills to become the best qualified and experienced acquisition leaders possible. The Air Force has developed the Acquisition Professional Development Program (APDP) to meet the DAWIA mandate to develop a skilled, professional work force and formalize career paths for personnel who wish to pursue careers in acquisition. These career paths are required to have specific education, training and experience requirements for those in acquisition positions as well as a certification process. The APDP follows DoD directives, instructions, and manuals (DoDD 5000.52, DoD 5000.52-M, DoDD 5000.57, DoDI 5000.58) establishing policy and procedures for the acquisition work force and its acquisition leaders. The APDP consists of five areas designed to ensure the acquisition work force has the appropriate tools, skills, and qualifications to effectively execute their jobs, gain knowledge and experience, and acquire the proper competencies to become successful acquisition leaders. The following five areas represent the APDP and will be discussed next: career levels and certification standards, membership into the Acquisition Corps and holding Critical Acquisition Positions; acquisition training and education, career development and management, and mentoring.

CAREER LEVELS AND CERTIFICATION STANDARDS

Within each of the 13 acquisition career fields there are training and educational requirements established for three career levels: basic or entry (Level I: GS-05 through GS-09, officer O-1 through O-3); intermediate or journeyman (Level II: GS-09 through GS-12, officer O-3 through O-4); and advanced or senior (Level III: GS-13 and above, officer O-4 and above).⁶⁶ The idea is that the individual level standards will form the basis for the next level of progression in a building block manner. Since each acquisition duty position has a career level standard established for it, this will ensure the appropriate experience, education, and training is received. For example, the following are the mandatory and minimum experience and training standards for the Program Management (63A) career field levels:

- Level I – One year of program management experience, and one basic DAU course in systems acquisition management.
- Level II – Two years of acquisition experience with at least one in program management, and one intermediate DAU course in systems acquisition management.
- Level III – Four years of acquisition experience with at least two years in a program office or similar organization, and one advanced DAU course in program management.

Once these individuals meet the mandatory standards of experience, education, and training established for a career level (I, II, or III) in an acquisition career field, then they receive the appropriate certification. However, when an individual is assigned to a position and does not meet the applicable certification standards, the organization has 18 months to get the person certified or obtain a waiver.⁶⁷ Although there are certain circumstances that may prevent mandatory requirements from being met in a timely manner, 18 months is excessive. Career field levels are standards deemed necessary for an individual to effectively execute the job. Without the appropriate experience, training, and education at the beginning of their assignment, they will not have the skills to efficiently execute responsibilities within the organization. Therefore, waiver approval should be extremely limited and training certification standards should be met within three months from arrival.

A provision within DoD 5000.52-M states that “when individuals are assigned directly to the acquisition work force in a Level II or III position, it isn’t necessary to meet the standards established for lower level positions. As an example, a person who did not have prior DoD acquisition experience and is assigned to a Level III acquisition position would not be required to meet the Level I or II mandatory standards to be certified as a Level III.”⁶⁸ This provision

doesn't make sense given the rationale identified for the need for standards. Perhaps the stipulation was included to allow career development opportunities for those outside the acquisition work force and to take into consideration the rank of individuals associated with the requirement for higher level positions (Level III: GS-13 and above, officer O-4 and above). Regardless, if an individual is needed to fill a Level III acquisition position which requires at least four years of experience and a program management course (requiring prerequisite knowledge of acquisition terminology, education, and experiences) and doesn't meet these requirements, then the person should not be qualified, eligible, or considered for the job.

In addition to certification standards, there are statutory educational and experience requirements for acquisition leadership positions such as Program Executive Officers (PEOs), Program Managers (PMs), and Deputy Program Managers (DPMs):

- A PEO is a military or civilian official who has primary responsibility for directing several acquisition category programs and must have taken the Program Managers Course (PMC) and the Executive Program Managers Course (EPMC) or approved comparable course; have 10 years of acquisition experience (four years performed in a Critical Acquisition Position (CAP)); and held a PM or DPM position.⁶⁹
- A PM is a military or civilian official who is responsible for managing an acquisition program and must have taken the Program Managers Course (PMC) and the Executive Program Managers Course (EPMC) or approved comparable course; have eight years of acquisition experience (four years performed in a program office or similar organization – two of these four may have been performed in an acquisition position of equivalent responsibility); and signed a written agreement to stay in the assignment through completion of the milestone closest to four years.⁷⁰
- A DPM is an individual with the authority to act for the PM in his or her absence and must have taken the Program Managers Course (PMC) and the Executive Program Managers Course (EPMC) or approved comparable course; have six years of acquisition experience (two years performed in a program office or similar organization); and signed a written agreement to stay in the assignment through completion of the milestone closest to four years.⁷¹

Any civilian or military member who does not meet these education, training, and experience standards for PEOs, PMs, and DPMs are not authorized to continue in the position beyond six months unless a waiver is granted. A waiver shall be granted only if unusual

circumstances justify the waiver or determine the individual's qualifications obviate the need for meeting the required education, training, and experience standards.⁷² Given the importance of these leadership positions and the qualification requirements deemed necessary for individuals to have the appropriate skills and experiences, waivers need to be severely restricted and should be denied. Again, if the person doesn't meet the mandatory duty position requirements, then the person should not be qualified, eligible, or considered for the position. If these requirements are not appropriate or don't take into consideration certain circumstances, then they need to be modified accordingly.

ACQUISITION CORPS AND CRITICAL ACQUISITION POSITIONS

It has been determined that acquisition leaders in preparation for advancement to greater levels of responsibility and authority need to demonstrate exceptional analytical and decision-making capabilities and job performance, and gain the appropriate experience. These are required to earn membership into the Acquisition Corps, which is a critical step in preparation for acquisition leadership. The following are the requirements for entry into the Acquisition Corps.⁷³

- Grade/Rank: Minimum of GS-13 or major
- Experience: Four years of acquisition experience
- Training: Certification at Level II or Level III or completion of all mandatory Level II or Level III acquisition career field training
- Education: Bachelor's degree at an accredited educational institution
- Education: At least 24 semester credit hours (or the equivalent) of study from an accredited college or university in the following disciplines: accounting, business finance, law, contracts, purchasing, economics, industrial management, marketing, quantitative methods, and organization and management – or – At least 24 semester credit hours (or the equivalent) from an accredited college in the person's career field and 12 semester credit hours (or the equivalent) from such an institution from among the disciplines listed above or equivalent training as prescribed by the Service Secretary to ensure proficiency in those disciplines
- Employees are exempt from the degree standard only if they were serving in an acquisition position on 1 October 1991, had less than 10 years in acquisition positions as of that date, and had 24 semester credit hours in the disciplines states above.

Acquisition Corps eligibility is a prerequisite for serving in a Critical Acquisition Position (CAP). CAPs vary in scope and span of control, but must be filled by Acquisition Corps

members with a minimum grade/rank of GS-14/O-5. They are positions of significant responsibility, primarily involving supervisory or management duties in the DoD acquisition system and include acquisition leadership positions such as PEOs, PMs of major defense acquisition programs or significant nonmajor defense acquisition programs, and DPMs of major defense acquisition programs.⁷⁴

ACQUISITION TRAINING AND EDUCATION

For acquisition leaders to perform their jobs effectively and efficiently, it is imperative they continuously learn throughout their careers, strive to improve professional knowledge and performance, and adapt to the dynamic, challenging, and changing environment we know today. They must maintain their business and technical prowess through continued learning, graduate education, and advance acquisition, business, and technical training. The acquisition community believes this is important and training and education is essential to prepare future acquisition leaders to conquer program management challenges within a volatile, uncertain, complex, and ambiguous environment. Therefore, the USD (AT&L) has issued a continuous learning guide and memorandum to the services requiring that in addition to the certification training requirements mentioned previously, the work force will acquire a minimum of 40 Continuous Learning Points (CLP) every fiscal year as a goal with 80 CLPs being mandatory within two years.⁷⁵ To assist the acquisition work force in meeting these mandatory and continuous training and education requirements, the DoD and the Air Force has established educational institutions, programs, and offices such as the Defense Acquisition University (DAU), the Air Force Acquisition Training Office (AFATO), the Air Force Institute of Technology (AFIT), and the Senior Acquisition Education Program (SAEP) to ensure our acquisition work force is adequately prepared to meet current and future challenges.

Defense Acquisition University

The DAU is primarily responsible for providing the formal education and training for acquisition certification training and continuous learning for all 13 acquisition career fields. The University was established on 1 August 1992, authorized by 10 U.S.C. 1746, and chartered by DoDD 5000.57. It offers a catalogue of courses and sponsors the full range of basic, intermediate, advanced, assignment-specific, and continuous learning courses to support the mandatory requirements, career goals, and professional development of the acquisition work force and it's future leaders. In 2001-2002, it transformed from a traditional university to a corporate university emphasizing web-based training and performance consulting in the workplace. Strategic partnerships with universities (e.g. Stevens Institute of Technology,

Strayer University, Massachusetts Institute of Technology, Georgetown University), industry (e.g. Lockheed Martin), and professional organizations (e.g. Defense Institute of Security Assistance Management and National Imagery Mapping Agency) were also formed.⁷⁶ The strategic partnerships were established to offer enhanced opportunities for the work force to meet education goals by participating in graduate level programs and increasing the skills, knowledge, and abilities of the work force.

In addition to expanding training, consulting, and developing partnerships, the DAU focused on acquisition leader training and completely reengineered its program management (PMT) curriculum to offer advanced program management training to a larger portion of the acquisition work force while providing additional focused training for acquisition leaders such as PMs and DPMs. The changes to the PMT curriculum are reflected in Figure 1.

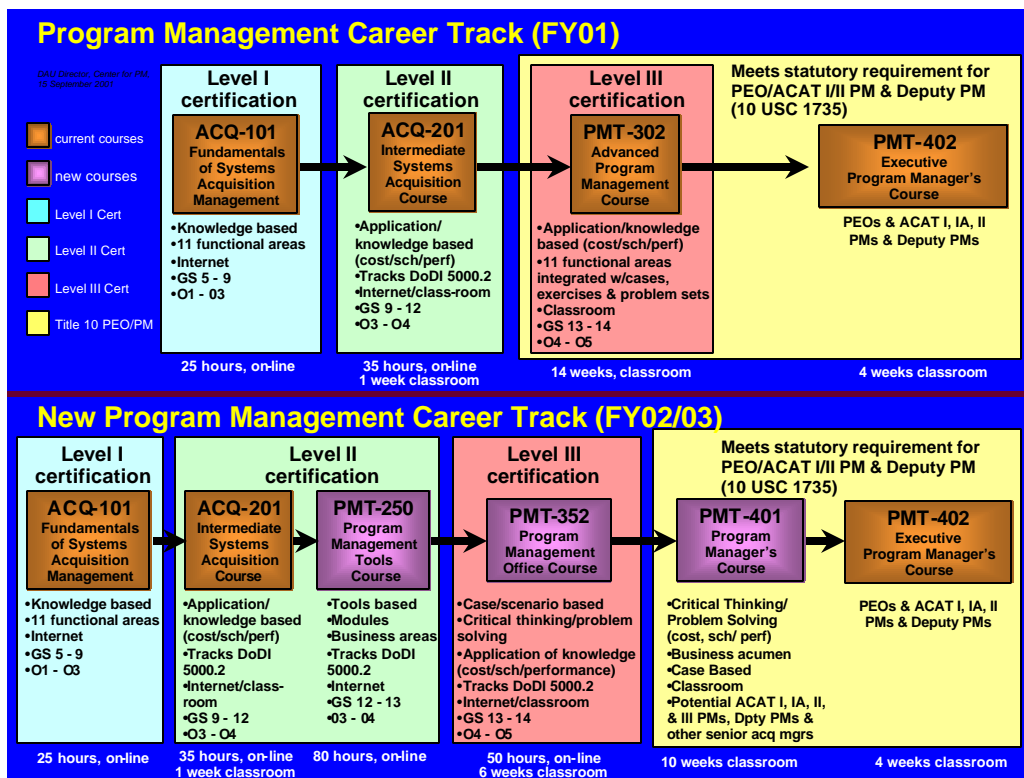


FIGURE 1. DAU PROGRAM MANAGEMENT CURRICULM

To provide more training when and where needed, the DAU developed and realigned regional campuses in Huntsville, AL; Patuxent River, MD; San Diego, CA; Dayton, OH; and Fort

Belvoir, VA and integrated electronic and web-based tools and innovative classroom training. They are developing modular course designs to easily update rapidly changing course material while increasing the ability to focus training on the specific needs of the work force. They're also providing more resident training where appropriate and increasing reliance on hybrid and distance learning courses in order to expand the reach of training while reducing travel costs and time away from work.⁷⁷ Although reducing the individual's time away from work is an advantage for an individual's organizations, it may be a disadvantage to the individual taking the training while continuing to work. Quite often accomplishing mandatory work and hot actions within organizations are higher priorities than training. For the individual to learn the training material, it will be incumbent upon supervisors to reduce or rearrange workloads, embrace and reinforce the importance of training, and value the individual's time to complete it. If this is effectively accomplished then the individual can be adequately educated in many different environments, and the flexibility and curriculum offered by the DAU initiatives will be successful in meeting the needs of the acquisition professional and the organization.

Air Force Acquisition Training Office

To assist the acquisition work force with training, the Air Force stood up the AFATO to provide the acquisition community with the necessary tools and guidance to ensure they are adequately trained and prepared to meet their acquisition responsibilities. The AFATO is the Air Force focal point for administering the DAU training management process. However, they do not oversee the acquisition training or administer the non-DAU training programs and processes. They manage several aspects of Air Force acquisition training, such as policy-making implementation, budget development and management, requirements determination, quota allocation, and student selection. The AFATO also manages the APDP system automated web-based tools that allows the work force to prepare and submit applications for DAU classes (called ACQ Now), obtain acquisition status and career information (the Acquisition Career Management System (ACMS)), acquire DAU course metric data, and register for continuous learning courses as well as track associated points.⁷⁸

Although AFATO manages the ACMS, they are not affiliated with the Air Force Personnel Center (AFPC). Training requirements for duty positions are obtained manually and are not affiliated with the acquisition personnel and assignment system. Although projected assignment information will be available through the ACMS, there is no automated mechanism for identifying and viewing the training requirements for projected assignments or specific positions. If the acquisition training and assignment systems were integrated, then individuals would be

able to receive training requirements for their new positions as part of their assignment notification, and they would be able to view the assignment position on-line and see what training is required and desired. This would also allow the assignment system to take into consideration the necessary training required and assist in ensuring individuals arrive to their duty station with the requisite training necessary for them to effectively execute their jobs. It would also allow the training point of contact within the gaining organization to efficiently assist in monitoring the status of incoming personnel and scheduling the appropriate training at the proper time. For this automated and integrated training and assignment system to occur, it would require all organizations with acquisition positions to identify and continuously reevaluate and update specific mandatory and desired training requirements for all positions.

Continuously identifying and updating requirements would then allow organizations to monitor the status of their personnel to ensure they're getting the appropriate training required and have developed the requisite technical skills to successfully perform their work. The Command and Control System Program Office at Electronic Systems Center (ESC/GA), Hanscom Air Force Base (AFB), MA, has developed a tool to appropriately monitor and report training status. They mandate training requirements and completion dates to ensure their people are mission capable. They have developed an innovative web-based program allowing both individual members to update training progress and supervisors to track subordinates' achievements in real-time, including viewing CLPs.⁷⁹ This innovative tool is an excellent example for other organizations to follow. It would be valuable for AFATO to research this tool and similar initiatives by innovative organizations and determine the viability of these products, and then offer these tools to all acquisition organizations.

Currently, the plan is to integrate and consolidate the AFATO tools and training information into the new Air Force Portal that pulls together information for Air Force personnel into a single site. This is part of a new, fast-paced strategy to migrate Air Force information technology toward the vision of "One Air Force – One Network." It will allow users to easily access relevant acquisition career management information and related services so they can administer, plan, and execute their careers on-line and all in one place.⁸⁰ It would be valuable to include validated tools developed by organizations, such as ESC/GA for all to use. In addition, an integrated acquisition training and assignment system located on the Air Force Portal would also be extremely useful in preparing officers for their acquisition assignments.

Air Force Institute of Technology

To become a leader within the Air Force, an AAD is required. The AFIT, located at Wright-Patterson Air Force Base AFB, OH, is a formal source of graduate-level education within the acquisition community. Officers obtain graduate degrees in programs that will greatly assist the acquisition community as well as expand and broaden an officer's knowledge base. The Institute organizationally falls under Air Education and Training Command and its mission is to provide responsive, defense-focused graduate and continuing education, research, and consultation to improve Air Force and joint operational capability. The Institute accomplishes this mission through three AFIT resident schools and several civilian institute programs. The three resident programs are the Graduate School of Engineering and Management, the School of Systems and Logistics, and the Civil Engineer and Services School. The programs are designed to meet the educational requirements common to a wide variety of assignments. They provide scientific and technological education in an Air Force research and development (R&D) environment as well as professional and graduate education in acquisition, logistics, engineering, and management.

Although systems engineering is a program within the School of Engineering and Management, a separate Center for Systems Engineering has recently been established. According to the Secretary of the Air Force, James G. Roche, "Many of our current system acquisition programs are suffering from a lack of attention to or inconsistent application of good systems engineering principles. The center will refocus on these principles and provide the associated education and training for our future work force."⁸¹ The center will emphasize applying disciplined system engineering throughout a weapon system's entire life cycle, and educate the acquisition and sustainment community on how the systems engineering management process supports programmatic decision making, and how it interacts with other acquisition functions throughout the life cycle.⁸² It is expected the Center will ensure our future acquisition leaders think systematically capturing all aspects of the life cycle of a program.

Recently the Air Force and the Navy signed an agreement to form an alliance between AFIT and the Naval Postgraduate School (NPS) to provide relevant high-quality education more aligned with defense needs for a joint environment while eliminating duplicate degree programs and consolidating educational processes.⁸³ Under the agreement, NPS will be the lead institution for meteorology and acquisition management, and AFIT will offer the aeronautical engineering curriculum for both services.⁸⁴

In addition to graduate level education, AFIT manages the educational and training programs of Air Force officers enrolled in civilian universities, research centers, hospitals, and

industrial organizations. There are four training programs with industry that allow acquisition work force members to work with leading edge business partners to glean the best of change, innovation, and leading edge business practices that will be implemented to transform DoD.⁸⁵ The opportunities are offered for rank/grades lieutenant/GS-11 through lieutenant colonel/GS-14. These programs vary in duration from 20 weeks to 12 months and are available at over 40 geographically dispersed companies. The first is a 10-month program, Education with Industry (EWI), designed to mutually benefit both the Air Force and industry by giving Air Force personnel a better understanding of the aerospace industry so they can better perform their jobs in relationship to industry. The AFPC, based upon a competitive review of all applicants, makes selections for EWI. The second program, Streamline Education with Industry (SEWI), is four to six months and is aimed toward highly qualified Air Force and civil service contracting professionals. The Air Force's Contracting Directorate makes competitive selections for SEWI based upon nominations from Major Commands and AFPC. The third, Industrial Development Education in Acquisition (IDEA), is an Air Force Materiel Command (AFMC) four to six month program aimed toward highly qualified Air Force officers and civil service members in career fields related to systems research, development, procurement, and support. AFMC's Personnel Directorate makes competitive selections for military applicants and AFPC career program managers make competitive selections for civilian applicants. The last, Education with Laboratories (EWL), is a 10-month program that only applies to eligible Air Force captains (or selects) with a strong technical background. These individuals are placed with one of three participating Department of Energy national laboratories: Los Alamos, Sandia, or Lawrence Livermore. These four experiential training programs are seen as important investment opportunities in transforming Air Force acquisition processes and revolutionizing changes in information and related technologies that will improve business practices.⁸⁶ The AFPC, based upon a competitive review of all applicants, makes selections for EWL.

Although the four industry training programs are managed by AFIT, there is not a consistent selection and placement process. Three separate organizations, AFPC, AFMC, or Headquarters Air Force selects individuals for these four programs. There should be one central process for submitting applications, and selecting and placing candidates. This would ensure there is a consistent methodology for selection and placement. Eligible candidates should have the opportunity to prioritize and apply to several programs. They should not have to apply to three separate organizations for selection. This will cause confusion and deconfliction problems among the organizations. The AFPC or perhaps the AFATO (if their role is expanded), with advice and recommendations from the acquisition community, should be

responsible for selecting candidates. In addition, after selection, AFIT places individuals into the appropriate organizations and companies for EWI, SEWI, and IDEA; however, AFPC places individuals into EWL. This should also be consistent. Since AFIT is responsible for managing the programs, they should be responsible for placing candidates for all programs.

Senior Acquisition Education Program

A SAEP has been established for the education and training of senior civilian and military acquisition professionals. This program is comprised of a variety of offerings equivalent to senior professional military education (PME) and covers the broad spectrum of disciplines represented in the acquisition work force.⁸⁷ In addition, as part of the SAEP, acquisition content is included in a senior course at the Industrial College of the Armed Forces (ICAF) and is supposed to be the preeminent course for civilian and military members of the Acquisition Corps.⁸⁸ Unfortunately, beyond the ICAF acquisition related subject material (such as the planning, programming, and budgeting system offered to the general ICAF population), specific acquisition requirements for the senior course are underwhelming. The senior acquisition course only requires officers enrolled in the program to take at least one acquisition elective per semester. Upon graduation, a special senior course acquisition certification is provided to those who have successfully met the requirements. Although DoDD 5000.57 mandates the establishment of this course at ICAF, this course should be offered at all senior service schools and not just ICAF. Currently, all the senior service schools offer elective programs. Including the curriculum in all the service's senior military education schools would allow more acquisition leaders the opportunity to take the courses and continue their acquisition education.

CAREER DEVELOPMENT AND MANAGEMENT

The DoD has established policies and procedures for the effective management (including accession, education, and career development) of DoD professionals in acquisition positions. The two areas of concentration in acquisition work force management are position management and career development. Career development is the professional development of employee potential by integrating the capabilities, needs, interests, and aptitudes of employees in the functional career fields, through a planned, organized, and systematic method of training and development designed to meet organizational objectives.⁸⁹ It is accomplished through a combination of work assignments, job rotations, training and education, and self-development programs. DoD 5000.52-M prescribes procedures and standards for a DoD career development program for acquisition personnel and applies to all acquisition work force members, both military and civilian, who are in or desire to be in the 13 acquisition career

fields.⁹⁰ The approved standards are to be implemented by DoD components without supplementation. The Secretaries of the military departments are required to establish a Director of Acquisition Career Management (DACM) to assist in these responsibilities.

Within the Air Force, the DACM is an additional duty of the Deputy Assistant Secretary (Acquisition Integration), SAF/AQX. However, the associate DACM, Mrs. Carolyn Bean Willis, responsible for the Acquisition Command Management and Career Division (SAF/AQXD), at the Pentagon, is primarily responsible for acquisition professional development - including the direction, coordination, and review of actions mandated by DAWIA. She is also the executive secretary to the Air Force Acquisition Professional Development Council responsible for guiding and monitoring the implementation of the system which provides the appropriate education, training, and experience to ensure that qualified personnel are available and selected to fill acquisition positions. Her office works with various MAJCOM acquisition functional representatives and is responsible for the development and implementation of acquisition professional development policies and procedures, the supervision and evaluation of field applications, the programming and budgeting for specialized education and training curricula, and the administration of professional certification programs.⁹¹ In addition, this office manages the Air Force Acquisition Career Management web-site to keep the acquisition work force informed and current on the important issues in career development. For example, the site provides information on new services offered, work force issues and initiatives, resources, policies, professional development and career guides, training and education, and recognition programs.

The Air Force has developed an officer career path guide to direct rated, non-rated operations, mission support, chaplain and medical service, and judge advocate officer personnel in their professional development. The acquisition section is one of three areas (logistics and base support are the others) identified under mission support and includes the five acquisition officer career fields (Scientists (61S), Developmental Engineering (62E), Acquisition Management (63A), Contracting (64P), and Financial Management (65F)).

The guidance is broad and varies in specificity by career field. It stresses that success means different things to different people, and there are numerous paths to success within each career field. Success should not be associated with achieving a certain rank. It discusses timelines, job positions, and endeavors, such as achieving the proper balance of operational experiences (OPEX) or technical experiences, staff, and leadership experiences through various acquisition assignments from laboratories, System Program Offices (SPOs), Air Logistics Centers (ALCs), headquarters, and field activities.⁹² The guidance also addresses the

importance of professional military education, completing a master's degree preferably related to an individual's career field, taking advantage of formal and informal educational and training opportunities as well as leadership prospects. Although guidance for the career fields is expected to be different, some of the guidance, in particular the education guidance, is similar across the five career fields. However, there is no consistent or categorical standardization (e.g. education, certification training, career broadening, timelines) across the career fields to ensure all aspects of career development are adequately covered. Consistency and standardization also aids readability and assists supervisors from other career fields in understanding expectations and knowing the difference between general Air Force and acquisition specific information to adequately mentor acquisition officers.

Other than what is displayed in Figure 2, there is no discussion on the affiliation of assignments, timelines, and certification levels (Level I, II, III) amongst each of the five acquisition officer career fields. This information has to be gathered from many other sources. There is a career path pyramid (Figure 2)⁹³ for each career field to get a general understanding of the career path; however, it would be easier to understand and allow more specificity if the

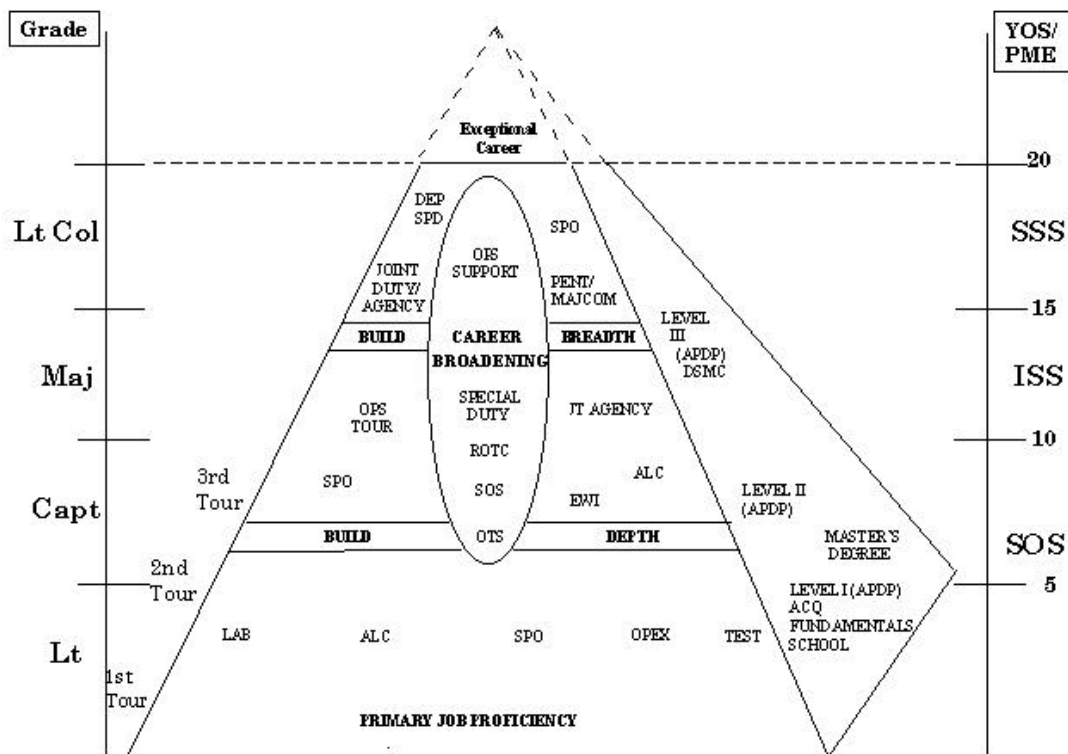


FIGURE 2. ACQUISITION MANAGEMENT CAREER PATH PYRAMID

educational requirements, PME, certification levels and job proficiency/skill level information was provided with greater detail in a matrix format associated with the years of service (YOS) and a certain grade.

The career path guide needs to be a comprehensive document and should include all information, including links to references, considered necessary for acquisition officers and civilians to proceed through their careers. This guide should include information, such as methods and educational requirements needed to enter the acquisition career fields; training and education requirements for the three different career levels and what types of positions typically require these levels; the separate career paths to become either a technical expert, a manager, or a senior leader; information on the Acquisition Corps and critical acquisition positions; mentoring guidance; and formal and informal training and educational opportunities and where to get information on courses. Although this type of information is hosted in several different documents, directives, manuals, instructions, and separate locations on the internet, a comprehensive all-inclusive document with embedded links to additional sources is necessary to provide the framework for the development of the acquisition professional. This will provide one source for information, reduce redundancy, place the enormous amount of information in a manageable format, maximize the valuable use of time, and lower frustrations levels.

Currently as part of the retention initiatives, new career management guides are being coordinated and developed to provide acquisition professionals, commanders, supervisors, and mentors with an understanding of established, desired, and required education, training, experience and attributes for acquisition careers. The focus is to provide a reference guide and general information on career development for both civilian and military personnel in acquisition positions.

The Scientist and Engineering (S&E) career management guide is currently being coordinated and the program management guide is in development. The S&E guide greatly expands upon the general information provided in the Air Force Officer Career Path Guide by discussing the breadth and depth of professional development, the transformational concept of force development, and three career paths (technical expert, manager/leader, senior leader) for officers and civilians.⁹⁴ For each of these career paths, it contains examples, information, and requirements (within a matrix) on training and certification, education and PME, job skills, overarching competencies and qualities, possible job opportunities, and other recommendations - such as seeking a mentor and improving personal and professional qualities.⁹⁵ It also includes a myriad of career development web-sites providing additional information for officer and civilian career planning. Having both military and civilian career information in one location will be

extremely useful for supervisors to increase their knowledge and gain access to additional information. Unfortunately, military supervisors who haven't been exposed to civilian employees don't often understand the civilian structure and vice versa. The link to the additional sites will be extremely helpful for both military and civilians.

The purpose of these new acquisition guides are to assist officers, civilians, supervisors, and mentors in evaluating possible career paths, understanding associated expectations, and establishing a mutual understanding of career expectations between Air Force leadership and the acquisition work force. They are a great improvement and should replace the acquisition information in the existing officer career path guide. This would eliminate confusion and any duplication. In addition, as the three career path concept evolves, these career path guides should continuously be improved and should be expanded to become the comprehensive document with embedded links discussed earlier.

MENTORING

In July 2000, the Air Force issued an Air Force Mentoring Program Policy Directive (AFPD 36-34) and an Air Force Instruction (AFI 36-3401) formally establishing mentoring in the Air Force and to provide guidance for its implementation for all officers, enlisted and civilian personnel. The goal is to help each person reach his or her potential and enhance the overall professionalism within the Air Force. Therefore, it is the inherent responsibility of Air Force leaders to mentor future leaders.

A mentor is defined as a trusted counselor or guide, and mentoring is the relationship in which a person with greater experience and wisdom guides another person to develop both personally and professionally.⁹⁶ Mentors are informally and formally expected to discuss career guidance; professional and personal development goals; Air Force history, heritage, and doctrine; knowledge of air and space power; the Air Force's core values of integrity, service before self, and excellence; the importance of physical fitness; professional military and academic education requirements; performance feedback; promotion potential; and future assignments.⁹⁷

Although AFI 36-3401 is supposed to address how to carry out Air Force mentoring, it only provides broad guidance on a variety of subjects, references 29 additional documents for further review and understanding, and doesn't explain how to mentor. It states that commanders are responsible for promoting mentoring programs within their units and immediate supervisors or raters are designated as the primary mentors for each of their subordinates.⁹⁸ However, it doesn't discuss the responsibility of an individual to find a mentor for proper guidance or the

development of leadership competencies and skills required of our future leaders. The document briefly addresses mentoring responsibilities, PME and academic education, professional associations, evaluation and performance feedback, promotion selection, the military assignment system, and recognition programs.⁹⁹

Unfortunately, the instruction doesn't entirely correlate with the subject matter addressed in AFPD 36-34 that mentors are informally and formally expected to discuss. The instruction should include, in greater detail, all areas addressed in the policy directive and expand upon the responsibilities of those being mentored and essential leadership characteristics and qualities needed for our future leaders.

Effective mentors are instrumental in the acquisition professional development process. Therefore, as part of the retention initiatives, the Air Force is developing acquisition specific mentoring guides to complement the career path guides. These guides will be web-based to facilitate and improve mentoring activities, and assist junior scientists, engineers, and program managers with finding appropriate mentors. It will be important for these guides to expand upon the current Air Force mentoring instruction, provide greater detail with respect to career management, and include leadership development to adequately assist mentors with developing our future acquisition leaders both personally and professionally. Although AFI 36-3401 states commanders are responsible for promoting mentoring programs, it is essential they enthusiastically promote them and ensure effective mentoring is being accomplished. Supervisors must be actively involved with their people and learn the best means to mentor. Organizational leaders are not only responsible for successfully completing the mission, but ensuring their people have the tools and are prepared to meet the dynamic challenges of today and tomorrow.

AIR FORCE TRANSFORMATION AND FORCE DEVELOPMENT

It is not the strongest of the species that survives, nor the most intelligent, but rather the one that is most adaptable to change.

—Charles Darwin

To support the vision of global vigilance, global reach and global power in a changing strategic environment, the Air Force continues to transform itself and pursue and adopt new operational concepts, organizational changes, and advanced technologies to significantly improve its warfighting capability and the ability to meet changing security environment demands.¹⁰⁰ The FY 2003-2007 Air Force Transformation Flight Plan describes this transformational effort and was written to support the operational goals of transformation

expressed in the 2001 QDR. The plan explains that transformation will be accomplished through various ways: acquiring new technologies to perform new missions or significantly improving old systems and processes; using existing capabilities in new ways; changing how the Air Force is organized, trained, and equipped; changing doctrine and force employment tactics, techniques, and procedures; changing the way forces are led and leaders are prepared; improving how forces interact with each other to produce effects in battles or campaigns; and developing new operational concepts.¹⁰¹

To support these ways, a great deal of emphasis has been placed upon the importance of people as well as changing organizational structure and creating an environment and culture conducive for transformation to occur. One of the major initiatives being undertaken to support this cultural adaptation is developing air and space leaders to ensure Air Force officer development programs produce an officer corps fully conversant in a changing world, current in evolving warfare doctrine, and proficient in the line specialty for which they were trained.¹⁰² Although the Air Force continues to transform, it has been more than 20 years since the Air Force has conducted such a comprehensive review of its human resources development programs. The Air Force has determined its members require a more deliberate development system that moves beyond managing careers within functional “stovepipe” communities. A broader institution-wide requirements process is needed to produce members with greater ability to lead in the complex and dynamic future battlespace.¹⁰³ A new leadership development methodology, “Force Development,” (FD) is being created through the Air Force Senior Leader Management Office (AFSLMO) to fundamentally change the way the service prepares its future leaders. This methodology is anticipated to foster an environment for innovators and senior leaders acclimated to change. It is expected that broadening Air Force member’s knowledge and experience base will expose them to alternate ways of thinking and different ways of solving problems.¹⁰⁴ To date, the Air Force Chief of Staff (CSAF) has approved two major FD constructs:

- The identification of specific and required senior transformational leaders necessary to envision, develop, support, employ, and sustain the Air Force for the next 15-25 years. These transformational leaders are currently categorized as operations, information, force support, and material.
- A competency-based development model emphasizing two categories of competencies: occupational (specific to functional training and certification), and universal (those skills/attributes relevant for all officers).¹⁰⁵

Brigadier General Richard S. Hassan, director of the AFSLMO, states “the new FD concept has two goals: to produce generals and colonels with broader operational and strategic perspectives than current personnel policies allow; and to better meet the expectations of officers who often feel the personnel system operates at odds with their career aspirations.”¹⁰⁶ Given the expected environment of the 21st Century, the concept is being implemented to develop leaders with credibility and an intuitive understanding of the Air Force’s unique air and space capabilities and how to best employ them – in other words, leaders who can see and understand the big picture.¹⁰⁷ It is expected to properly balance core competencies, development assignments, professional education, training, mentoring, and deployments. Personnel development will move away from a one-size-fits all approach to development and be tailored to each person with the focus on getting the right people into the right development experience at the right time.¹⁰⁸ It will be based upon a deliberate variety of experiences and challenges combined with educational and training opportunities designed to ensure that experiences emphasize a breadth of exposure to the Air Force mission while focusing on the depth of experience needed for the person’s job.¹⁰⁹ Depth is gained through enhancing career-specific professional competence and developing technical skills. Breadth is deliberately gaining knowledge and experiences (operational, staff, joint, special duty assignments), beyond an officer’s initial core specialty, that promotes a fuller understanding of the development, employment, and support of aerospace power; thereby, increasing the officer’s ability to serve.¹¹⁰

CAREER DEVELOPMENT AND TRANSFORMATIONAL LEADERS

To facilitate the FD concept and the strategic depth and breadth requirements for Air Force leaders, continual changes are being made to virtually all aspects of how the Air Force develops its leaders. The personnel assignment system is being redesigned to stress career development as the top priority and assist in increasing retention and accession levels. The new assignment system will be based upon institutional requirements, give individuals more input, change the way people are assigned to schools and jobs, and develop teams to focus on developing individuals rather than on filling vacancies.¹¹¹ Institutionalized processes, such as education and promotion central selection boards and command boards, as well as development teams (i.e. commanders/supervisors, MAJCOMs, personnel, functional managers (acquisition management, logistics, engineering)) will assist in the development of an individual’s career and future transformational leaders by tailoring assignments to their needs and offering opportunities for breadth once depth of experience has been proven.

In addition, a human resource development tool (HRDT) is being developed to link, through the Air Force Portal, development teams, institutional managers, core and specialty managers, and individual officers to a HRDT data repository that includes data in the following areas: personnel, education/training, assignment, functional manager, institutional, and the FD construct. This will facilitate rapid data transfer and allow individuals, managers, and teams to have access to a wider variety of data all linked through the Air Force Portal.

The concept of developing transformational leaders with depth and breadth begins by officers (lieutenants – captains) achieving depth through education, training, and experience (a tactical viewpoint) in one or more of the 42 occupational specialties shown in Figure 3. After receiving specialty certification, they will start to acquire breadth and transition to perhaps one or more of the 12 core specialties. Upon receiving core specialty certification at approximately 8-13 years of service (majors – lieutenant colonels), they may expand their breadth of expertise (operational view point), driven by Air Force requirements, and transition to broadening assignments (lieutenant colonel – colonel) where they will receive broadening certification in preparation for becoming a senior (colonel and General Officer - strategic viewpoint) transformational leader (operational, information, force support, or materiel). To assist in developing Air Force requirements, general officers are currently providing the skill requirements they believe are necessary to successfully accomplish their jobs. These requirements will be used to determine the appropriate skills of our future transformational leaders. In the area of acquisition development, they have currently identified the need for acquisition officers to receive broadening experience in the areas of contracting, mobility operations, or plans and programs. In addition, the following career fields are expected to receive broadening experiences in acquisition: logistics, communications, space, fighter, airlift, tanker, and non-rated command and control intelligence, surveillance, and reconnaissance (C2ISR).¹¹²

The process in Figure 3 can be illustrated by using the acquisition specialties of acquisition management and developmental engineering as an example. Acquisition managers and developmental engineers would be certified specialists in these areas based upon the education, training, and experience (E, T, and EX) they receive in their first 5-8 years of service. Given the mandatory E, T, and EX requirements specified by DAWIA for the acquisition work force, this won't be difficult for acquisition professionals to receive specialty certification. Based upon the acquisition managers and developmental engineers E, T, and EX, they may be assigned by development teams to the core specialties of either space operations, information warfare operations, political-military strategist, or systems acquisition. They would be certified

specialists in these areas at 8-13 years of service if they met the established E, T, and EX requirements. This certification would then allow them to career broaden to those areas deemed necessary through Air Force requirements. Based upon their E, T, and EX, they may be selected to broaden by receiving assignments in such areas as plans and programs, acquisition application, and education. If they received the broadening certification, again based upon achieving the appropriate E, T, and EX, they would be considered qualified candidates to become a transformational Materiel Leader.

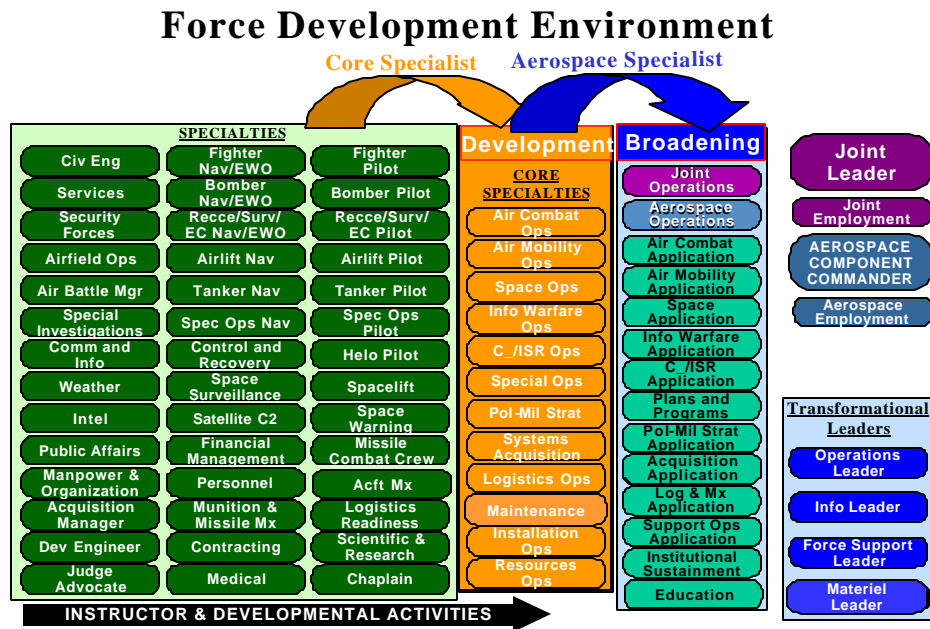


FIGURE 3. FORCE DEVELOPMENT CONSTRUCT

Based upon this process in the FD environment, officers may enter into the acquisition and materiel leader track by either starting in an acquisition officer career field specialty and acquiring depth (scientist, engineering, acquisition management, contracting, financial management) or transitioning later for breadth into the core and broadening specialties of systems acquisition and acquisition application, respectively. Regardless of how they enter or transition into these specialties, it will be essential for officers to meet the mandatory and designated career level and certification requirements for the Acquisition Corps and CAPs as well as DoD 5000.52-M and DAWIA requirements for acquisition work force career development. The mandatory E, T, and EX requirements established by DAWIA for acquisition positions should not be waived to give breadth opportunities if officers are not adequately qualified to fill these positions.

The Air Force is currently in the process of integrating S&E development paths with the AFSLMO FD concept. They are presenting career management concepts and looking at possible career paths. They are also reviewing the functional management of S&Es at the tactical and operational phases of their careers. Once the S&E career paths are vetted and integration is complete, they will next concentrate on the acquisition management career field. For all the acquisition career fields, the Air Force will need to focus on providing a balance between meeting acquisition work force requirements, ensuring qualified officers are selected for acquisition positions, and ensuring transformational leadership opportunities are provided for acquisition personnel. One of the key factors in the DAWIA and in developing a more highly qualified military acquisition work force is to ensure military officers in acquisition are primarily devoted to acquisition management and have the necessary education, training, and expertise to effectively manage programs.¹¹³ Consequently, it is expected that military officers serving in the Acquisition Corps have spent the predominant share of their military careers serving in acquisition positions.¹¹⁴ As a result, the acquisition career path has become specialized and has less options for commander positions, overseas assignments, and other career broadening activities. Because of these limitations, these facts are currently presented to Field Grade Promotion Boards to ensure Acquisition Corps officers compete equally with other career paths.

In addition, the DAWIA states that Acquisition Corps officers are expected, as a group, to be promoted at a rate not less than the rate for all line officers (both in the zone and below the zone) in the same grade.¹¹⁵ If it is the intent for future acquisition leaders to meet the intentions of the DAWIA and have the requisite education, training, and expertise to become effective transformational materiel leaders, then officers will not only require breadth in various specialties (including acquisition), but will need depth in acquisition related specialties as well. The FD certification standards for acquisition core and broadening specialties need to be developed and closely coordinated with SAF/AQXD to ensure these standards don't conflict with DAWIA requirements and will be included as part of the acquisition career path and mentoring guides currently being developed.

Officers who choose to stay in their functional specialty and take a technical career path, such as science and engineering, will be valued for their technical knowledge and deep functional competence. Although they do not transition or aspire for breadth to become a transformational leader, they will not be denied advanced professional development.¹¹⁶ They will be allowed to follow a successful technical career track to retirement, and although they would not have the breath to become strategic senior leaders, they would have the experience

and expertise at the tactical and operational levels necessary to continue supporting the Air Force mission.¹¹⁷

COMPETENCY BASED AND EDUCATIONAL DEVELOPMENT

The FD concept of occupational competencies are also being addressed through education and training. There is a change in construct behind intermediate service school (ISS) PME and advanced academic degrees (AADs). It is understood not all Air Force officers require the same cookie-cutter approach to education to complete PME and acquire an AAD. The new educational opportunities will be considered equally valuable and no longer will it be a promotional requirement to have completed PME and an AAD separately. In an attempt to better match officer assignments with long-term career development goals, officers are now being offered the opportunity to get PME credit and their master's degrees at the same time, at places like AFIT, to give them the educational experience required for their Air Force duties.¹¹⁸ For this program to be a success, it will be important for Air Force leadership to embrace this shift in thinking and not adversely affect the promotional opportunities of those individuals affected by the program.

To ensure all officers receive the fundamental ISS PME concepts, intermediate PME modules of instruction are being developed consisting of the basic knowledge all are required to learn.¹¹⁹ These modules will be a requirement for all Air Force officers promoted to major. Current ISS PME requirements consist of the following topics: air and space operations, operational forces, joint operations, war and conflict, war theory, the strategic environment, leadership and command, and conflict resolution. It will be important for the new PME modules to contain the subject areas affecting all officers, (a minimum air and space operations, the strategic environment, leadership and command and conflict resolution) and they become mandatory for those acquiring only an AAD as a replacement to the traditional ISS PME. This will assist in the facilitation not to just check the master's degree box for promotion, but get a degree tailored to an individual with the appropriate PME that will be beneficial for the individual's career as well as the Air Force.

For this program to be effective and the education useful, officers must apply these degrees upon graduation and should be directly assigned to positions that require the type of education the officer just received. In the future, it is expected that qualified individuals, in all career fields, will be offered AADs in conjunction with tailored PME based on what's required for their jobs.¹²⁰ This should certainly ensure officers have the appropriate education for future positions within the Air Force. For example, an officer acquiring a graduate acquisition systems

management degree from AFIT would have the requisite educational requirements per DAWIA to fill a corresponding acquisition coded position and prepare to become a future materiel leader within the Air Force.

In addition to the AAD changes, Air University is amending the Air Command and Staff College (ACSC) ISS curriculum for the class of 2004, to better train officers by adding a module of instruction tailored to the individual's next assignment.¹²¹ However, there is no mention of those officers assigned to fellowship programs or sister service schools. These officers will need to have access to these modules as well. Typically, officers are assigned to career broadening positions upon leaving ISS and do not have the experience or education to either meet the demands of their job or effectively contribute from the beginning. This will give officers the familiarization (Acquisition 101, Space 101) needed for their follow-on assignments. Although this familiarization will be helpful in understanding terminology and providing a basic awareness of the new subject matter, it is important to ensure all mandatory and desired training and certification level requirements are met for the positions they will hold. If the Air Force requirements, personnel, and training processes and systems were integrated, then individuals would know well ahead of time the training requirements for their future positions and could adequately prepare by corresponding with their future organizations, taking the appropriate ISS modules, initiating on-line training and self study, and receiving training in route. The gaining unit and the assignment personnel would then be able to ensure adequate training is received and officers are sufficiently prepared for the challenges of their new positions.

There has been a great deal of emphasis placed upon changing the ISS PME construct; however, Senior Service School (SSS) PME has not been addressed. The same cookie-cutter approach to education doesn't apply to senior officers either. The selection process for attending SSS or an equivalent fellowship program should be based upon broadening the officer's knowledge and offering different opportunities. The SSS selection panel that consists of an arbitrary group of colonels, should be expanded to include functional experts and AFSLMO FD officers that understand the requirements for our future transformational leaders (Operations, Informational, Force Support, and Materiel). This panel then needs to look closely at the officers' previous assignments (depth, breadth, and joint), AAD(s), types of PME they've received (both service specific and joint), and determine the type of senior level education that would benefit both the individual and the Air Force. The alternatives could be a different type of SSS than ISS they attended or an AAD specifically suited to their career field. This is particularly important to ensure a greater percentage of officers are receiving the proper breadth required of our transformational leaders.

There are significant and continuous occupational changes being implemented and planned with regard to career and transformational leadership development, the personnel assignment system, and education and training. Change is needed to give our future leaders the educational opportunities and depth and breadth of experiences required for our future transformational leaders. The FD concept is expected to broaden the Air Force member's knowledge and experience base and expose them to alternate ways of thinking and different ways of solving problems. The initiatives planned to date are on their way to accomplishing this goal. FD is also anticipated to foster an environment for innovators and senior leaders acclimated to change. However, this will entail developing leaders with universal values and attributes that not only have the technical skills, but also have conceptual, and interpersonal skills to influence, operate, and improve in an exceedingly complex environment. It will require the appropriate leadership guidance, direction, and doctrine with a unifying leadership theme that is Air Force-centric and embraces the concept of leading airmen. Currently, there is no Air Force leadership or command doctrine; however, the Air Force Doctrine Center is working to obtain direction and consensus (Air Force Doctrine Document (AFDD) 1-3) to encompass the subjects of leadership, force development, and education and training.¹²² Although there is neither Air Force leadership doctrine nor corresponding FD initiatives published to date on universal leadership competencies, there is a character and leadership committee that reports to the FD advisory board and focuses on the integration of character and leadership issues and activities.¹²³ This board and AFSLMO should be involved in the development and coordination of AFDD 1-3. Hopefully they will assist in developing, considering, and recommending universal initiatives to cultivate our future leaders and to address the lack of leadership focus and retention problem discussed previously.

LEADERSHIP COMPETENCIES AND SKILLS

There is a high degree of uncertainty in the pursuit of innovation. The key to coping with that uncertainty is bold leadership supported by as much information as possible. Leaders must assess the efficacy of new ideas, the potential drawbacks to new concepts, the capabilities of potential adversaries, the costs versus benefits of new technologies, and the organizational implications of new capabilities.

—Joint Vision 2020

The keys to innovation are having a flexible acquisition system, having the right policies, and having the right people with the freedom to manage. This will result in providing better performing systems to the warfighter in less time, and at less cost.¹²⁴ Developing acquisition

leaders to manage and meet the needs of the Air Force will require professionals with the proper education and training, career development and experiences, as well as leadership skills and competencies necessary to make the most appropriate decisions at the lowest level possible to rapidly deliver affordable, sustainable capability to the warfighter.

Acquisition leaders are responsible for leading organizations within a competitive and technology driven strategic environment characterized by the highest degree of uncertainty, complexity, ambiguity, and volatility. This environment has created the necessity for strategic acquisition leaders to master conceptual, technical, and interpersonal competencies with the proper values and attributes essential to effectively perform their required tasks.¹²⁵ They need to possess these valuable leadership competencies to think strategically, taking into consideration bureaucratic and political influences and their effect on organizational goals and objectives in order to successfully develop and rapidly deliver future warfighting capabilities. They must be able to make timely decisions, think logically, and communicate effectively in an exceedingly complex environment, especially in the context of related functions such as military doctrine, operational requirements, the defense strategy, industrial preparedness, evolutionary acquisition/spiral development, and policies promoting science and technology. Acquisition leaders must be strategic thinkers focusing on multiple aspects rather than in one specific functional area with single criterion and one-on-one exchanges. They need to think systematically regarding the interrelationships between acquisition areas, such as R&D, engineering, quality management, manufacturing, contracting, financial management, test and evaluation, logistics, leveraging technology, program control, and risk management.

Acquisition leaders need to have the skill set to effectively lead teams since integrated product teams (IPTs) are included in hierarchical program offices. They require skills for team-building, problem-solving and decision-making, conflict resolution, setting vision and goals, mentoring, and leading in an environment of change. They must motivate, develop, and inspire IPTs to transition from the forming, storming, and norming phases of team development to the last stage performing. Lastly, acquisition leaders need to understand how to empower their people and foster an environment for innovation, critical and creative thinking, and trust. They must have the capacity to effectively manage processes and procedures while leading the organization to proactively shape new ideas, develop fresh approaches to long-standing problems, and open issues to new options.

These needs are the reason the acquisition community has provided and placed a great deal of importance on education and training and career development, to ensure our future acquisition leaders have the technical skills and occupational competencies to effectively

execute their jobs and meet the demands of the warfighter. However, to foster an innovative and supportive environment as well as address the retention issue and lack of leadership problem discussed previously, more emphasis needs to be placed upon universal competencies and the importance of leadership values and attributes, and developing conceptual and interpersonal skills to assist in improving how acquisition leaders manage and accomplish their tasks and lead their people.

Conceptual skills require sound judgment and enable leaders to manage ideas as well as the ability to think creatively and reason analytically, critically, and ethically.¹²⁶ Interpersonal skills are the “people skills” that allow leaders to effectively know and lead their people. Specifically, these skills are coaching, teaching, counseling, motivating, empowering, and communicating through one and two-way communication, active listening, and paying attention to nonverbal communication.¹²⁷ Various observations, survey responses, and current literature have led to four categories of interpersonal leadership qualities proven most effective for senior leaders - positive attitudes, values, character, and credibility:

- The most significant attitudinal qualities were enthusiasm, devotion, and encouragement. Enthusiasm is considered to be contagious and can deliver energy and transform all aspects of the organization. Devotion is reflected in the desire to lead and achieve a vision. Encouragement is a powerful motivator and satisfies human needs, and focuses on the positive versus dwelling on errors and the negative.¹²⁸
- The values-related qualities identified were trust, loyalty, integrity, and honesty. The degree to which these qualities are present in the leadership of an organization will relate directly to the organization’s effectiveness and the value of its members. These values require leaders to demonstrate reliability and personal commitment.¹²⁹
- Charisma, compassion, courage, a sense of humor, and optimism were the extremely important character traits most emphasized. Leadership is a combination of competence and character. However, if you look at failed leaders, there is typically a failure of character, not competence. Showing the moral courage to make tough decisions, acknowledging when a wrong has been committed, laughing, and treating subordinates as people with feelings will encourage an environment for trust and dedication considered enjoyable.¹³⁰
- The three previous categories provide the basis for credibility and the ability to draw out the unique strengths of each member within an organization. Credibility

is extremely fragile and is gained through persistent leadership. To be credible, a leader must be a role model and lead by example as well as be accountable and take responsibility for all actions, including those of subordinates.¹³¹

Acquisition officers must understand and accept the need for these conceptual and interpersonal competencies and adapt and learn if they expect to be successful leaders. This will be a significant challenge if they limit themselves by their personality preferences or the narrow roles they observed or were trained to play. Thorough research indicates that all people have a personality preference creating certain strengths and weaknesses that may create difficulties in adapting to the changing environment expected in the 21st century. The personality assessment tool, Myers Briggs Type Indicator (MBTI), is based upon the work of the Swiss psychiatrist Carl Jung, and is a popular instrument used today by the DoD to measure personality styles and preferences. This concept of personality type shows that all people have a core to their personality that consists of two parts. The first is how they experience the world (sensing (S) or intuition (N)), and the second is how they make decisions based upon this experience (thinking (T) or feeling (F)). Two other aspects of the personality surround the core. The first is how they orient themselves to the world (extroversion (E) or introversion (I)) and the second is the attitude taken (judging (J) or perceiving (P)).¹³² One of the ways of using the knowledge gained through this tool is to examine four separate and distinct classes of people from a temperament perspective: SJ, SP, NT, and NF. People in each of these classes have certain characteristics in common and think, act, and behave in predictably similar ways.¹³³ These characteristics can then be used to understand behavior based upon preferences.

Mr. Otto Kroeger, the author of the book "Type Talk at Work," conducted a MBTI temperament survey of the students within the Class of 2003 at the United States Army War College (USAWC) and the Air War College (AWC). The results of the surveys are exhibited in Table 4.¹³⁴ Although the preferences identified for the war colleges represent various career fields, these preferences can easily be associated with officers within any career field, including the Acquisition Corps. The percentages by temperament for both colleges were extremely close and have been relatively stable over the past several years. Evidence indicates that unlike the general population, these senior leaders, representative of the current leadership within the Army and Air Force, have a preference for the SJ and NT temperaments with two-thirds of the students having a SJ preference. According to Mr. Kroeger, people with these temperaments are typically drawn to the military and this is the reason for the disparity between the general population and the war colleges.¹³⁵

MBTI	Description ¹³⁶	General Population	USAWC	AWC
SJ	<ul style="list-style-type: none"> • Prefer to work in orderly, structured environments; • Loyal to the organization; • Believes rules and regulations are meant to be followed to the letter; and • Value hard work and value work for world's sake. 	38%	64%	62%
SP	<ul style="list-style-type: none"> • Prefer openness, freedom of action; • Tolerate rules - only useful if they don't get in the way; • Don't let rules get in the way of getting the job done best way possible; and • Crave action – not satisfied with a calm and routine environment. 	38%	7%	7%
NT	<ul style="list-style-type: none"> • Prefer creative, dynamic, changing environments; • Value conceptual work, the world of ideas, and organizational growth; • Constantly ask why?; and • Work is an outlet for creative energies not necessarily to get work done now 	12%	25%	29%
NF	<ul style="list-style-type: none"> • Catalyst for understanding and improving the extent and the nature of human interactions in the organization; • Prefer a harmonious work environment; • Interests are not in the work itself, but how to help people get the work done more effectively and productively. 	12%	5%	3%

TABLE 4. MBTI ARMY AND AIR WAR COLLEGE CLASS OF 2003 RESULTS

To work outside a preference is not natural or automatic, feels uncomfortable and awkward, takes a great deal of concentration, effort, and energy. Although it would be tiring, it can be done if necessary and the adjusted behavior improves with practice.¹³⁷ For example, the roles required for certain positions (i.e. public speaker, facilitator, negotiator) can sometimes disguise true preferences and when appropriate, individuals can behave opposite to their preferences. If acquisition leaders are expected to learn the conceptual and interpersonal skills mentioned previously as well as seek innovative ways to mitigate risk, it is incumbent upon the Air Force acquisition leadership to educate their people and create an environment where they can step away from their preferences and thrive.

Too often leadership education is focused solely upon the responsibility of the individual to either learn leadership skills through self-development or through the examples of others.

Unfortunately, given increased responsibilities and our technologically driven work environment, officers rarely have the time to accomplish their required tasks and adequately balance personal and professional time to study or think about the leadership competencies required of strategic leaders. This environment as well as personality preferences has led to a preponderance of officers only focusing on successfully completing tasks (through any means), and not mentoring or providing the best leadership examples to subordinates. Therefore, when these subordinates eventually assume leadership positions they are not adequately prepared. Acquisition organizations must realize this deficiency and give higher priority and devote more resources to train and educate these future leaders. Organizations should seek educational leadership programs and courses through various institutions, such as the military service academies, command and staff colleges, war colleges, the DAU, the Center for Creative Leadership (Greensboro, NC), and the Center for Reflective Leadership (Hubert Humphrey Institute at the University of Minnesota). Organizational leaders must provide officers with both military and civilian educational opportunities and time to learn the interpersonal and conceptual skills required of effective leaders because “excellence in leadership is reflected in the effective leadership and management of change within an institution, not in the routine execution of daily responsibility.”¹³⁸

LEADERSHIP AND COMMAND OPPORTUNITIES

Leadership is much more an art, a belief, a condition of the heart, than a set of things to do. The visible signs of artful leadership are expressed, ultimately, in its practice.

—Max Depree

Until recently, the Air Force has not considered the responsibilities of acquisition program management leaders to be equivalent to the command level responsibilities of operational or mission support commanders. This is partly due to language within the recently cancelled DoDD 5000.1 that states, “A PM has no other command or staff responsibilities within the component.”¹³⁹ This has led to little emphasis on understanding, consolidating, and standardizing program management requirements and centrally selecting the most qualified officers to meet these requirements to fill acquisition leadership positions. This has created problems with promotion boards because they have difficulty in recognizing and understanding the roles and responsibility of acquisition leaders.¹⁴⁰ Members of these boards, outside the acquisition community, have provided consistent feedback that when evaluating acquisition officer records and evaluation reports they are confused by the numerous duty titles leading to

uncertainty about the officer's scope of responsibility (i.e. program director, program manager, system program director, system support manager, project manager, single manager, and developmental system manager).¹⁴¹ They also noted an ambiguous stratification of the acquisition hierarchy and there was no CSAF sanctioned screening process for acquisition leaders comparable to the centralized selection process for operational and mission support commanders. Unfortunately, this has resulted in recurring lower promotion rates, especially to colonel, and has led to a lack of understanding and recognition for the acquisition officer's contribution to the Air Force.¹⁴²

To address these issues, the CSAF has directed that acquisition leaders will be selected using the standard Air Force Command Screening Board (CSB) process.¹⁴³ This directive means acquisition leaders will be selected by a process that will consider them equivalent to commanders in comparable operational and mission support units (groups and wings). Therefore, in FY 2001, the Air Force established a centralized requirements and selection process for acquisition program managers. The goals were to remove duty title ambiguity, and clarify organizational stratification to demonstrate Air Force acquisition supports all roles and missions of the Air force and will be organized accordingly.¹⁴⁴

A comprehensive requirements review was conducted across the entire Air Force for all colonel acquisition program manager positions. After positions were identified, the organizations associated with these positions were stratified and equated to either Air Force wing or group equivalent organizations. This determined program manager equivalency to either a Wing or Group Commander. The Air Force determined the programs and corresponding command positions would be categorized as either a Materiel Leader Wing (comparable to an Air Base Wing) or a Materiel Leader Group (comparable to a Fighter Group). Programs were assessed as either a wing or group equivalent based on factors such as the importance of the program to national defense, amount of leadership and technical challenges, political implications, program capability and visibility, number of people and dollars, and the amount of innovation and system life-cycle updates required.¹⁴⁵ The more difficult and important acquisition programs requiring greater responsibility were assessed to be equivalent to wing commands.

In the summer of 2002, AFSLMO, responsible for managing all matters involving Air Force colonels, including the CSAF's CSB process, began the first Command Selection process for Materiel Leaders. The process consisted of three steps.¹⁴⁶

- In July 2002, AFSLMO identified who was eligible to meet the CSB based on the following broad eligibility criteria:

- Materiel Leader Wing: Test pilot and test navigation officers (AFSCs -11E and 12E) and acquisition officers (AFSCs -61S, 62E, 63A, 64P) must be a pinned-on colonel with a date of rank (DOR) of 1 Jan 03 or earlier, less than 27 years total Air Force Commissioned Service (AFCS) as of 1 Jan 03, be an Acquisition Corps member Level III certified in any APDP functional area, and completed an Advanced Program Management Course. Logistics officers (AFSCs -21B or 21R) must meet the same DOR and AFCS requirements, but must be Level II certified in Acquisition Logistics, and previously served at the group level. All eligible officers must have held the duty AFSC (DAFSC) during the last seven years.
 - Materiel Leader Group: Test, acquisition, and logistics officers must all meet the same AFCS and DAFSC requirements as above; however, colonel selects are eligible to compete. Test and acquisition officers must be Level III certified in any APDP functional area.
- In September 2002, AFSLMO conducted the CSB, chaired by a four-star general officer and included Major Air Command Vice Commanders and functional area representative board members. The CSB produced a Command Candidate List (CCL) used to fill all command requirements for the next year's assignment cycle. The results of the CSB were announced in October 2002. The board selected 10 candidates for Materiel Leader Wing and 67 command candidates for Materiel Leader Groups.
- Candidates on the CCL were then looked at for possible command assignments. Candidates were matched to command positions and in February 2003, a Command Selection List (CSL) was produced and assignments were loaded into the Military Personnel Data System. The board selected 7 officers for Materiel Leader Wings and 35 officers for Materiel Leader Groups.

The goals for the CSB are to make command selection an open, visible process, and to provide colonels and colonel-selects with a realistic assessment of their opportunity to command.¹⁴⁷ This process signifies a positive step in standardizing the requirements and selection process for acquisition leaders and will assist them in determining if the Air Force believes they have the adequate depth and breadth to become a future transformational Materiel Leader. Since this process is new for Materiel Leaders, AFSLMO is currently developing an operating instruction to describe the process and eligibility requirements. Once approved, it is important this instruction is made available, referenced, and incorporated into the

career development guides for acquisition officers. This will ensure acquisition officers understand the concept and future leadership opportunities. Due to the fact acquisition programs evolve throughout their life cycle and may change in their degree of importance and difficulty, requirements for these materiel leadership positions will need to be continuously reviewed. Although the goal of the process was to standardize duty titles, this has not been accomplished. Duty titles for acquisition leadership positions need to be standardized to not only assist promotion boards, but provide a methodology for the officer acquisition work force to determine the level of responsibility associated with particular jobs.

Although there is now a formal process established for acquisition colonels and colonel-selects, the same issues affect lieutenant colonel and majors. Duty titles are not standardized and there is no complementary selection process for field grade officers and acquisition programs equivalent to squadrons. These squadron level positions are needed to develop field grade acquisition officers for future Materiel Group and Wing Leader responsibilities. Currently, there are AFPC-hosted squadron commander boards open to lieutenant colonels and lieutenant colonel-selects, majors, and major-selects for the following twelve career fields: Civil engineering, communications, comptroller, contracting, intelligence, logistics, medical, mission support, security forces, services, weather, and chaplain.¹⁴⁸ Two of these career fields are for acquisition officers, comptroller (65F) and contracting (64P) with contracting requiring the contracting APDP Level II certification or higher. However, there are no squadron level command boards for the other acquisition career fields of scientists (61S), engineering (62E), and acquisition management (63A) unless these officers compete outside of their core AFSC, if released by their assignment team, to acquire command experience. According to the eligibility requirements, they may compete for five other career fields: contracting if they meet the APDP requirement; intelligence and logistics if they have previous experience in an intelligence and logistics-related assignment, respectively; and mission support and services.¹⁴⁹ Competing for these assignments offers a great opportunity for breath and is a needed experience; however, the acquisition community needs to offer these opportunities within the three other career fields as well to develop future Materiel Leaders.

Obtaining leadership and command experience has been an understood requirement for officers to achieve higher ranks within the Air Force. Gaining command experience has been given so much importance that acquisition officers will either cross-train into another career field or compete outside their AFSC to achieve this experience and attain the word "Commander" in their records. Two recent initiatives within the Air Force substantiate this belief. First, "the Air Force has authorized wear of the Air Force Command Insignia to recognize the extraordinary

commitment and dedication required to perform the Air Force's most important leadership function and the challenging responsibilities of command."¹⁵⁰ The insignia is approved for wear by field grade officers in the ranks of major through colonel who have Uniform Code of Military Justice (UCMJ) authority and are filling or have filled a squadron or wing command position; or a position as determined by the MAJCOM Commander and approved by the CSAF as a command equivalent position which have been selected through a competitive process.¹⁵¹

Although Materiel Leaders have recently been selected for group and wing equivalent positions through the CSB, they will not be authorized to wear the insignia because they do not have UCMJ authority given to "Commanders." Secondly, on 6 June 2002, the Air Force approved the implementation of Command Responsibility Pay (CRP) starting in FY 2003. The Secretary of the Air Force and CSAF "recognize that our commanders have so much responsibility and are responsible for so much of the Air Force mission, and it requires so many long duty days, that they wanted to do something to say, 'We appreciate what you're doing and want to acknowledge how important you are in the day-to-day mission.'"¹⁵² Officers are eligible for the monthly pay (O-6 - \$150, O-5 - \$100, O-4 - \$50) if they are field grade officers in the ranks of major through Colonel who are filling a squadron, group, or wing command position and have UCMJ authority.¹⁵³

However, according to Air Force Personnel, unlike the eligibility for the insignia, "commander equivalent positions, do not, repeat do not, qualify to receive CRP (due to the threshold established in Title 37, Chapter 5, section 306. The Air Force does not have the authority to exceed this threshold)."¹⁵⁴ Title 37, Section 306 addresses special pay for officers holding positions of unusual responsibility and of critical nature. It states, "The Secretary concerned shall prescribe the criteria and circumstances under which officers of an armed force under his jurisdiction are eligible for special pay...,and not more than 10 percent of the number of officers on active duty in an armed force in pay grade O-4, O-5, or O-6, may be paid special pay under this section."¹⁵⁵ Therefore, CRP could be offered to officers who hold commander equivalent positions if the total CRP doesn't exceed 10 percent on active duty. Regardless, this pay is not being offered to equivalent command Materiel Leaders because they are not commanders who have UCMJ authority. Given the statement by the Secretary of the Air Force and CSAF on the importance of commanders and that command equivalent Materiel Leaders are not eligible for either the insignia or CRP, certainly gives the perception Materiel Leaders are not as important or have commensurate responsibility to officers who hold a commander designation.

Over the past several years, the acquisition community has deliberated the merits of command designation for selected “command-equivalent” acquisition program manager positions.¹⁵⁶ The Air Force General Counsel had previously identified concerns about “command” based on the statement within DoDD 5000.1; however, this document was canceled and the interim policy guidance doesn’t include the statement limiting command type responsibilities. Therefore, Air Force decisions about program manager commander designations should not be influenced by the recently canceled DoD guidance.¹⁵⁷ The Secretary of the Air Force for Acquisition (SAF/AQ) stated it best in a memorandum to the Air Force Deputy Chief of Staff for Personnel:

Colonel-level Program Managers’ responsibilities in the identified command-equivalent positions are directly comparable with the responsibilities of our operational commanders. A commander is charged with carrying out a specific mission. He or she does this by administering, directing, managing, guiding, supervising, and leading people. Acquisition program managers do the same thing when charged with executing a specific program(s) aimed at providing a capability to the warfighter. These program manager positions currently lack UCMJ authority; however, the test of command comes down to authority, accountability, and responsibility. All are required of program managers when executing a program. Therefore, command-equivalent program managers should hold command designations. Aside from the UCMJ authority, the responsibilities of program managers closely parallel those of our operational commanders. Program managers have responsibility for several hundred people and programs valued at hundreds of millions to billions of dollars.

Incumbents of command-equivalent program manager positions should receive comparable command or special pay. Such pay serves two related objectives. First, equivalent positions should receive equivalent pay and prestige. Second, command or special pay for these positions will help the Air Force attract our best program management candidates and retain our best performers. We entrust 30% of the DoD budget to program managers. These key people merit special consideration for their efforts and accomplishments. In addition, the Air Force faces critical shortages in program management. Such pay will help the Air Force keep those highly experienced colonels needed to run major acquisition programs.

In summary, our command-equivalent program managers are already defacto commanders. Their responsibilities are comparable to other Colonels in command positions at the group and wing levels. The law does not prohibit the command designation for program managers and the acquisition community believes there are compelling reasons for designating these positions as command billets.¹⁵⁸

RECOMMENDATIONS

As a result of the research, findings, and discussion within the paper, the following recommendations are provided to assist the Air Force in providing the tools, programs, and initiatives to nurture, develop, and retain our future acquisition leaders:

- Senior leaders need to address the lack of leadership issue discussed by mid-career officers. Senior leaders must “lead by example” and understand and accept the generational differences between Baby Boomers and Gen X’s and embrace them. They must change and foster a climate and culture of trust to allow mid-level officers to thrive in an environment that ensures their success to become future acquisition leaders. Senior leaders at all levels need to allow time for reflection and strive for balance between personal time, work, and family. (Refer to the “Lack of Leadership” section for further discussion).
- Due to low retention rates for senior officers and to be comparable with managers in the civilian sector, the Air Force needs to offer retention bonuses for colonels in the following career fields (61S, 62E, 63A) and lieutenant colonel program managers (63A) who are also highly sought after in the commercial sector. This leaves the impression these leaders are important to retain and the Air Force is looking at long-term implications. (Refer to the “Acquisition Work Force Accession & Retention Initiatives” section for further discussion).
- The program management career field needs to conduct a comprehensive study on 63A/60C positions and validate current manpower requirements by assessing the percentage of time and the associated work performed and not performed. In addition, the career field needs to standardize duty titles and identify the mandatory and desired training for all positions. (Refer to the “Acquisition Work Force Accession & Retention Initiatives” section for further discussion).
- The program management career field needs to look into future manpower requirements in 2005 and beyond to determine if there are enough personnel to meet the demands and work requirements levied by their organizations and the needs of the Air Force. (Refer to the “Acquisition Work Force Accession & Retention Initiatives” section for further discussion).
- Career field levels are standards deemed necessary for an individual to effectively execute the job. Therefore, waiver approval should be extremely limited and training certification standards should be met within three months from arrival versus 18 months. If an officer is needed to fill a Level III acquisition position and

doesn't meet requirements, then the officer should not be qualified, eligible, or considered for the job. (Refer to the "Career Levels and Certification Standards" section for further discussion).

- Any civilian or military member who does not meet the mandated standards for PEOs, PMs, and DPMs should not be authorized and hired into positions of such stature. Waivers need to be severely restricted, and should be denied. (Refer to the "Career Levels and Certification Standards" section for further discussion).
- For officers to receive the proper web-based and long distance training and learn the material, supervisors must reduce or rearrange workloads, embrace and reinforce the importance of training, and value the individual's time to complete it. (Refer to the "Defense Acquisition University" section for further discussion).
- The AFATO should be the focal point for all Air Force acquisition training, including non-DAU training programs. They should assess validated tools by the various MAJCOMs and agencies and be a repository for tools and training lessons learned. In addition, an integrated acquisition training and assignment system would be extremely useful in preparing officers for their acquisition assignments. (Refer to the "Air Force Acquisition Training Office" section for further discussion).
- The AFATO and AFPC needs to develop an automated mechanism for identifying and viewing training requirements for projected assignments or specific positions. For this automated and integrated training and assignment system to occur, it would require all organizations with acquisition positions to identify and continuously reevaluate and update specific mandatory and desired training requirements for all positions. (Refer to the "Air Force Acquisition Training Office" section for further discussion).
- There should be one central process for submitting applications, and selecting and placing candidates for the four AFIT industry training programs. The AFPC or perhaps the AFATO (if their role is expanded) should be responsible for selecting training candidates. Since AFIT is responsible for managing the programs, they should be responsible for placing candidates for all programs. (Refer to the "Air Force Institute of Technology" section for further discussion).
- The senior acquisition course should be offered at all senior service schools and not just ICAF. (Refer to the "Senior Acquisition Education Program" section for further discussion).

- The new career path guides need to be consistent and have categorical standardization (e.g. education, certification training, career broadening, timelines) across the acquisition career fields to ensure all aspects of career development are adequately covered. They should become comprehensive all-inclusive documents with embedded links to additional sources of information. They need to replace the acquisition career paths in the existing officer career path guide. (Refer to the “Career Development and Management” section for further discussion).
- AFI 36-3401 needs to entirely correlate with the subject matter addressed in AFPD 36-34 that mentors are informally and formally expected to discuss. The instruction should include, in greater detail, all areas addressed in the policy directive and expand upon the responsibilities of those being mentored and essential leadership characteristics and qualities needed for our future leaders. The new acquisition web-based mentoring guides need to expand upon the current Air Force mentoring instruction, provide greater detail with respect to career management, and include leadership development. Supervisors must be actively involved with their people and learn the best means to mentor. (Refer to the “Mentoring” section for further discussion).
- For all the acquisition career fields, the Air Force must focus on providing a balance between meeting DAWIA acquisition work force requirements, ensuring qualified officers are selected for acquisition positions, and ensuring transformational leadership opportunities are provided for acquisition personnel. If it is the intent for future acquisition leaders to meet the intentions of the DAWIA and have the requisite education, training, and expertise to become effective transformational materiel leaders, then officers will not only require breadth in various specialties including acquisition, but will need depth in acquisition-related specialties as well. The FD certification standards for acquisition core and broadening specialties need to be developed and closely coordinated with SAF/AQXD to ensure these standards don't conflict with DAWIA requirements and will be included as part of the acquisition career path and mentoring guides currently being developed. (Refer to the “Career Development and Transformational Leaders” section for further discussion).
- To ensure all officers receive the fundamental ISS PME concepts, Intermediate PME modules of instruction need to contain the subject areas affecting all officers,

(a minimum air and space operations, the strategic environment, leadership and command and conflict resolution) and become mandatory for those acquiring only an AAD as a replacement to the traditional ISS PME. (Refer to the “Competency Based and Educational Development” section for further discussion).

- For the new AAD versus ISS FD construct to be effective and the education useful, officers must apply these degrees upon graduation and be directly assigned to positions that require the type of education the officer just received. (Refer to the “Competency Based and Educational Development” section for further discussion).
- Air University is amending the Air Command and Staff College (ACSC) ISS curriculum to better train officers by adding a module of instruction tailored to the individual’s next assignment. However, officers assigned to fellowship programs or sister service schools need to have access to these modules as well. (Refer to the “Competency Based and Educational Development” section for further discussion).
- A new construct for Senior Service School (SSS) PME needs to be addressed. The selection process for attending SSS or an equivalent fellowship program should be based upon broadening the officer’s knowledge and offering different opportunities. The SSS selection panel should be expanded to include functional experts and AFSLMO FD officers and determine the best type of senior level education that would benefit both the individual and the Air Force. (Refer to the “Competency Based and Educational Development” section for further discussion).
- Develop, finalize and publish an Air Force leadership or command doctrine. Develop and focus on universal initiatives to cultivate our future leaders and to address the lack of leadership focus and retention problem. (Refer to the “Leadership Competencies and Skills” section for further discussion).
- Acquisition officers must understand and accept the need for conceptual and interpersonal competencies and adapt and learn. This will be a significant challenge if they limit themselves by their personality preferences or the narrow roles they observed or were trained to play. Air Force acquisition leadership must educate their people and create an environment where they can step away from preferences and thrive. (Refer to the “Leadership Competencies and Skills” section for further discussion).
- Acquisition organizations must focus on balanced leaders and give higher priority and devote more resources to train and educate future leaders. Organizations

should seek educational leadership programs and courses through various institutions to learn the interpersonal and conceptual skills required of effective leaders. (Refer to the “Leadership Competencies and Skills” section for further discussion).

- AFSLMO is currently developing an operating instruction to describe the process and eligibility requirements of the Materiel Leader CSB. This instruction should be made available, referenced, and incorporated into the career development guides for acquisition officers. (Refer to the “Leadership and Command Opportunities” section for further discussion).
- Due to the fact acquisition programs evolve throughout their life cycle and may change in their degree of importance and difficulty, requirements for group and wing materiel leadership positions should be continuously reviewed. (Refer to the “Leadership and Command Opportunities” section for further discussion).
- Duty titles for these acquisition leaders need to be standardized to assist promotion boards and provide a methodology for the acquisition work force to understand the level of responsibility commensurate with certain positions. (Refer to the “Leadership and Command Opportunities” section for further discussion).
- There is no complementary Materiel Leader CSB process for field grade officers and acquisition programs equivalent to squadrons for the acquisition career fields of scientists (61S), engineering (62E), and acquisition management (63A) unless these officers compete outside of their core AFSC. The AFPC and the acquisition community must standardize duty titles and develop a CSB process for squadron equivalents for these three career fields. (Refer to the “Leadership and Command Opportunities” section for further discussion).
- Materiel Leaders, now holding group or wing command equivalent positions, are not eligible to receive the command insignia and CRP. This gives the perception the Air Force leadership doesn’t believe they are as important or have commensurate responsibility to officers who hold a commander designation. Give Materiel Leaders UCMJ authority and a commander designator instead of just a “command-equivalency.” Allow them to wear the command insignia and receive command or comparable special pay. (Refer to the “Leadership and Command Opportunities” section for further discussion).

CONCLUSION

Developing professionals to lead innovative organizations to meet the objectives of the warfighter in a changing and diverse 21st Century environment will be key in incorporating technological advances and implementing acquisition initiatives, such as evolutionary acquisition and spiral development. The development of a professional work force and its accession and retention will be imperative for success in meeting current and future challenges in an uncertain, complex, ambiguous, and volatile environment. Acquisition leaders must be capable of accepting greater responsibility for decision making in diverse environments. They must be highly skilled, multi-functional, and able to use and adapt to new information-age technologies, and flexible enough to adapt to the change and uncertainty that will dominate the future security environment.

The Air Force has provided and placed a great deal of importance on education and training and career development to ensure our future acquisition leaders have the technical skills and occupational competencies to effectively execute their jobs and meet the demands of the warfighter. However, to foster an innovative and supportive environment as well as address the retention issue and lack of leadership problem discussed previously, more emphasis needs to be placed upon universal competencies and the importance of leadership values and attributes, and developing conceptual and interpersonal skills to assist in improving how acquisition leaders manage and accomplish their tasks and lead their people.

The acquisition work force isn't being lured away solely by lucrative civilian job offers. There is evidence officers are making decisions to leave the service for both pay and the lack of quality leadership. There is dissatisfaction with the values, attitudes, and interests of leadership at all levels and this would include the acquisition community. Therefore, the Air Force leadership must not only focus on recruitment, retention, education, and training but they must mentor and value their current scientists, engineers, and program managers by fostering a cohesive environment for mission support officers as well as operators. In addition, they must provide the same leadership and command opportunities at all levels, including squadron, and not differentiate between Commanders and Materiel Leaders. Why not "Materiel Commanders?"

The Air Force does not promote an organizational culture that understands the importance of acquisition professionals, accepts and rewards them for their commitment, dedication, acumen, and ability to mentor and lead people while meeting the needs of the warfighter. There must be a cultural change within the Air Force, both within and outside the acquisition community, in order to value and retain acquisition professionals. The perception is that

acquisition leaders are not as important or have commensurate responsibility to operational or mission support officers who hold a commander designation. This perception is substantiated through the command insignia and CRP issue.

There needs to be a change in the Air Force's culture concerning the acceptance and value of the acquisition work force. All Air Force personnel need to understand the value of their contributions, how they fit into the Air Force vision, and the importance of what they do in supporting the warfighter. This culture change must start from the top with the Air Force Secretary and Chief of Staff and carry over to each of the MAJCOMs and functional areas to understand the perspectives and importance of acquisition career fields. Addressing leadership development and changing the Air Force culture will enhance the ability to both recruit and retain qualified and motivated acquisition professionals who truly believe their contributions matter and have a future in today's and tomorrow's Air Force.

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